

eolf-seql

SEQUENCE LISTING

<110> Novartis International Pharmaceutical Ltd
 Glykos Finland Oy
 NATUNEN, Jari
 KANERVA, Anne
 HILTUNEN, Jukka
 SALOHEIMO, Markku
 VISKARI, Heli
 HUUSKONEN, Anne

<120> FUSION ENZYMES

<130> 61967-20010.40

<140> Not Yet Assigned

<141> Concurrently Herewith

<150> US 61/417,144

<151> 2010-11-24

<160> 147

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 445

<212> PRT

<213> Homo sapiens

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Ala	Pro	Gly	Arg	Pro	Pro	Ser	Val	Ser	Ala	Leu	Asp	Gly	Asp	Pro	Ala
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Ser	Leu	Thr	Arg	Glu	Val	Ile	Arg	Leu	Ala	Gln	Asp	Ala	Glu	Val	Glu
	50					55					60				
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Gly	Asp	Ala	Leu	Ser
65					70					75				80	
Ser	Gln	Arg	Gly	Arg	Val	Pro	Thr	Ala	Ala	Pro	Pro	Ala	Gln	Pro	Arg
			85						90					95	
Val	Pro	Val	Thr	Pro	Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	Ile	Ala
			100					105					110		
Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	His	Tyr
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Arg	Pro	Ser	Ala	Glu	Leu	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys	Gly
		130				135					140				
His	Glu	Glu	Thr	Ala	Gln	Ala	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	Val	Thr
145					150					155				160	
His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro	Asp	His
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Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	Trp	Ala
		180					185						190		
Leu	Gly	Gln	Val	Phe	Arg	Gln	Phe	Arg	Phe	Pro	Ala	Ala	Val	Val	Val
		195					200					205			
Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Arg	Ala
	210					215					220				
Thr	Tyr	Pro	Leu	Leu	Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	Ser	Ala
225					230					235				240	
Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ala	Ser	Arg	Pro	Glu
			245						250					255	
Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	Leu	Leu
			260					265					270		
Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	Phe	Trp

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Asp	Asp	275	Met	Arg	Arg	Pro	280	Glu	Gln	Arg	Gln	Gly	285	Arg	Ala	Cys	Ile
	290	Trp				295	Thr	Met	Thr	Phe	Gly	300	Lys	Gly	Val	Ser	
Arg	Pro	Glu	Ile	Ser	Arg	310	Thr	Met	Thr	Phe	Gly	315	Lys	Gly	Val	Ser	
305	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	Asn	Gln		
			325						330					335			
Gln	Phe	Val	His	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln	Arg	Glu		
			340					345						350			
Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro	Gln	Leu		
		355					360					365					
Gln	Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Arg	Lys	Glu	Leu	Gly	Glu	Val		
	370					375					380						
Arg	Val	Gln	Tyr	Thr	Gly	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala	Lys	Ala		
385	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala	Gly	Tyr		
			405						410					415			
Arg	Gly	Ile	Val	Thr	Phe	Gln	Phe	Arg	Gly	Arg	Arg	Val	His	Leu	Ala		
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Pro	Pro	Pro	Thr	Trp	Glu	Gly	Tyr	Asp	Pro	Ser	Trp	Asn					
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<210> 2

<211> 445

<212> PRT

<213> Pan troglodytes

<400> 2

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			20					25				30					
Ala	Pro	Gly	Arg	Pro	Pro	Ser	Val	Ser	Ala	Leu	Asp	Asp	Asp	Pro	Ala		
		35					40				45						
Ser	Leu	Thr	Arg	Glu	Val	Ile	Arg	Leu	Ala	Gln	Asp	Ala	Glu	Val	Glu		
	50					55					60						
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Gly	Asp	Ala	Leu	Ser		
65					70					75					80		
Ser	Gln	Arg	Gly	Arg	Val	Pro	Thr	Ala	Ala	Pro	Pro	Ala	Gln	Pro	Arg		
			85					90						95			
Val	Pro	Val	Thr	Pro	Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	Ile	Ala		
			100					105					110				
Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	His	Tyr		
		115					120					125					
Arg	Pro	Ser	Ala	Glu	Leu	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys	Gly		
		130				135				140							
His	Glu	Glu	Thr	Ala	Gln	Ala	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	Val	Thr		
145					150					155					160		
His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro	Asp	His		
			165						170					175			
Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	Trp	Ala		
		180						185					190				
Leu	Gly	Gln	Val	Phe	Arg	Gln	Phe	Gly	Phe	Pro	Ala	Ala	Val	Val	Val		
		195					200					205					
Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Gln	Ala		
	210					215					220						
Thr	Tyr	Pro	Leu	Leu	Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	Ser	Ala		
225					230					235					240		
Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ala	Ser	Arg	Pro	Glu		
			245						250					255			
Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	Leu	Leu		
			260					265					270				
Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	Phe	Trp		
		275					280					285					
Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala	Cys	Ile		
	290					295					300						
Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	Val	Ser		

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Ala	Tyr	Asp	340	Arg	Asp	Phe	Leu	Ala	345	Arg	Val	Tyr	Gly	Ala	350	Pro	Gln	Leu
Gln	Val	Glu	355	Lys	Val	Arg	Thr	Asn	360	Asp	Arg	Lys	Glu	Leu	365	Gly	Glu	Val
Arg	Val	Gln	370	Tyr	Thr	Gly	Arg	Asp	375	Ser	Phe	Lys	Ala	Phe	380	Ala	Lys	Ala
Leu	Gly	Val	385	Met	Asp	390	Leu	Lys	395	Ser	Gly	Val	Pro	Arg	Ala	Gly	Tyr	400
Arg	Gly	Ile	405	Val	Thr	Phe	Gln	Phe	410	Arg	Gly	Arg	Arg	Val	His	Leu	Ala	415
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<210> 4

<211> 445

<212> PRT

<213> Macaca mulatta

<400> 4

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			20					25					30					
Ala	Pro	Gly	Arg	Pro	Pro	Ser	Val	Ala	Leu	Asn	Asp	Asp	Pro	Ala				
		35					40					45						
Ser	Leu	Thr	Arg	Glu	Val	Ile	Arg	Leu	Ala	Gln	Asp	Ala	Glu	Val	Glu			
	50					55					60							
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Gly	Asp	Ala	Leu	Trp			
65					70					75					80			
Ser	Gln	Arg	Gly	Arg	Val	Pro	Thr	Ala	Gly	Pro	Pro	Ala	Gln	Pro	His			
				85					90					95				
Val	Pro	Val	Thr	Pro	Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	Ile	Ala			
			100					105					110					
Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	His	Tyr			
		115					120					125						
Arg	Pro	Ser	Ala	Glu	Arg	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys	Gly			
	130					135					140							
His	Glu	Glu	Thr	Ala	Gln	Ala	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	Val	Thr			
	145				150					155					160			
His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro	Asp	His			
				165					170					175				
Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	Trp	Ala			
			180					185					190					
Leu	Gly	Gln	Val	Phe	His	Arg	Phe	Arg	Phe	Pro	Ala	Ala	Val	Val	Val			
		195					200					205						
Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Gln	Ala			
	210					215					220							
Thr	Tyr	Pro	Leu	Leu	Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	Ser	Ala			
	225				230					235					240			
Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ser	Gly	Lys	Pro	Glu			
			245						250					255				
Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	Leu	Leu			
			260					265					270					
Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	Phe	Trp			
		275					280					285						
Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Lys	Gly	Arg	Ala	Cys	Ile			
	290					295					300							
Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	Val	Ser			
	305				310					315					320			
His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	Asn	Gln			
				325					330					335				
Gln	Phe	Val	His	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln	Arg	Glu			
			340					345					350					
Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Ala	Ala	Pro	Gln	Leu			
		355					360					365						
Gln	Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Arg	Lys	Glu	Leu	Gly	Glu	Val			

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370	Arg	Val	Gln	Tyr	Thr	Gly	375	Arg	Asp	Ser	Phe	Lys	380	Ala	Phe	Ala	Lys	Ala	
385	Leu	Gly	Val	Met	Asp	390	Asp	Leu	Lys	Ser	Gly	395	Val	Pro	Arg	Ala	Gly	400	Tyr
				405	Thr	Phe	Gln	Phe	Arg	410	Gly	Arg	Arg	Val	His	415	Leu	Ala	
	Arg	Gly	Ile	420	Thr	Trp	Glu	Gly	Tyr	425	Asp	Pro	Ser	Trp	Asn	430			
	Pro	Pro	Pro	435					440						445				

<210> 5

<211> 447

<212> PRT

<213> Cricetulus griseus

<400> 5

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			20					25				30			
Ala	Pro	Gly	Arg	Pro	Pro	Ser	Asp	Ser	Ala	Ile	Asp	Asp	Asp	Pro	Ala
		35					40				45				
Ser	Leu	Thr	Arg	Glu	Val	Phe	Arg	Leu	Ala	Glu	Asp	Ala	Glu	Val	Glu
	50					55				60					
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Arg	Glu	His	His	Ala
65					70					75					80
Leu	Trp	Arg	Gln	Arg	Trp	Lys	Val	Pro	Thr	Val	Ala	Pro	Pro	Ala	Trp
			85						90					95	
Pro	Arg	Val	Pro	Ala	Thr	Pro	Ser	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val
			100					105					110		
Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu
		115					120					125			
His	Tyr	Arg	Pro	Ser	Ala	Glu	His	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp
	130					135				140					
Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Ser	Ala
145					150					155					160
Val	Thr	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Asn	Ile	Ala	Val	Pro	Pro
			165						170					175	
Asp	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg
			180					185					190		
Trp	Ala	Leu	Gly	Gln	Ile	Phe	Asn	Lys	Phe	Lys	Phe	Pro	Ala	Ala	Val
		195					200					205			
Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe
	210					215					220				
Gln	Ala	Thr	Tyr	Pro	Leu	Leu	Arg	Thr	Asp	Pro	Ser	Leu	Trp	Cys	Val
225					230					235					240
Ser	Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ser	Ser	Lys
			245						250					255	
Pro	Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu
			260					265					270		
Leu	Met	Ala	Glu	Leu	Trp	Thr	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala
		275					280					285			
Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Lys	Gly	Arg	Ala
	290					295					300				
Cys	Ile	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly
305					310					315					320
Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu
				325					330					335	
Asn	Gln	Gln	Phe	Val	Ser	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln
			340					345					350		
Arg	Glu	Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Ser	Ala	Pro
		355					360					365			
Leu	Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Gln	Lys	Glu	Leu	Gly
	370					375					380				
Glu	Val	Arg	Val	Gln	Tyr	Thr	Ser	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala
385					390					395					400
Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala

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Gly	Tyr	Arg	Gly	405	Val	Val	Thr	Phe	Gln	410	Phe	Arg	Gly	Arg	Arg	415	Val	His
Leu	Ala	Pro	Pro	420	Gln	Thr	Trp	Glu	425	Gly	Tyr	Asp	Pro	Ser	Trp	Asn		
		435						440						445				

<210> 6
 <211> 447
 <212> PRT
 <213> Rattus norvegicus

<400> 6

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		20						25					30					
Ala	Pro	Gly	Arg	Leu	Pro	Ser	Asp	Ser	Ala	Leu	Gly	Asp	Asp	Pro	Ala			
		35					40					45						
Ser	Leu	Thr	Arg	Glu	Val	Ile	His	Leu	Ala	Glu	Asp	Ala	Glu	Ala	Glu			
	50					55					60							
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Lys	Glu	His	Tyr	Ser			
65					70					75					80			
Leu	Trp	Arg	Gln	Arg	Trp	Arg	Val	Pro	Thr	Val	Ala	Pro	Pro	Ala	Trp			
			85					90						95				
Pro	Arg	Val	Pro	Gly	Thr	Pro	Ser	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val			
			100					105						110				
Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu			
		115					120					125						
His	Tyr	Arg	Pro	Ser	Ala	Glu	His	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp			
	130					135					140							
Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Thr	Ala			
145					150					155					160			
Val	Thr	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Asn	Ile	Ala	Val	Gln	Pro			
				165					170					175				
Asp	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg			
			180					185					190					
Trp	Ala	Leu	Gly	Gln	Ile	Phe	Asn	Lys	Phe	Lys	Phe	Pro	Ala	Ala	Val			
		195					200					205						
Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe			
		210				215					220							
Gln	Ala	Thr	Tyr	Pro	Leu	Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val				
225				230					235					240				
Ser	Ala	Trp	Asn	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ser	Ser	Lys				
			245					250					255					
Pro	Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu			
			260					265					270					
Leu	Leu	Ala	Asp	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala			
		275					280					285						
Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Lys	Gly	Arg	Ala			
	290					295					300							
Cys	Ile	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly			
305					310					315					320			
Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu			
				325					330					335				
Asn	Gln	Gln	Phe	Val	Pro	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln			
			340					345					350					
Arg	Glu	Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Gln	Val	Tyr	Gly	Ala	Pro			
		355					360					365						
Gln	Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Arg	Lys	Glu	Leu	Gly			
		370				375					380							
Glu	Val	Arg	Val	Gln	Tyr	Thr	Ser	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala			
385					390					395					400			
Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala			
			405						410					415				
Gly	Tyr	Arg	Gly	Ile	Val	Thr	Phe	Gln	Phe	Arg	Gly	Arg	Arg	Val	His			
			420					425					430					
Leu	Ala	Pro	Pro	Glu	Thr	Trp	Asn	Gly	Tyr	Asp	Pro	Ser	Trp	Asn				

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435

440

445

<210> 7
 <211> 447
 <212> PRT
 <213> Mus musculus

<400> 7

Met	Leu	Lys	Lys	Gln	Thr	Ala	Gly	Leu	Val	Leu	Trp	Gly	Ala	Ile	Ile
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			20					25					30		
Ala	Pro	Gly	Arg	Leu	Pro	Ser	Asp	Ser	Ala	Leu	Gly	Asp	Asp	Pro	Ala
		35					40					45			
Ser	Leu	Thr	Arg	Glu	Val	Ile	His	Leu	Ala	Glu	Asp	Ala	Glu	Ala	Glu
	50					55					60				
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Lys	Glu	His	Tyr	Ala
65					70					75					80
Leu	Trp	Arg	Gln	Arg	Trp	Arg	Val	Pro	Thr	Val	Ala	Pro	Pro	Ala	Trp
			85						90					95	
Pro	Arg	Val	Pro	Val	Thr	Pro	Ser	Pro	Val	Gln	Ile	Pro	Ile	Leu	Val
			100					105					110		
Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu
		115					120					125			
His	Tyr	Arg	Pro	Ser	Ala	Glu	Arg	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp
	130					135					140				
Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Thr	Ala
145					150					155					160
Val	Thr	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Asn	Ile	Ala	Val	Gln	Pro
				165					170					175	
Asp	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg
			180					185					190		
Trp	Ala	Leu	Gly	Gln	Ile	Phe	Asn	Lys	Phe	Lys	Phe	Pro	Ala	Ala	Val
		195					200					205			
Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe
	210					215					220				
Gln	Ala	Thr	Tyr	Pro	Leu	Leu	Arg	Thr	Asp	Pro	Ser	Leu	Trp	Cys	Val
225					230					235					240
Ser	Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ser	Ser	Lys
			245						250					255	
Pro	Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu
			260					265					270		
Leu	Leu	Ala	Asp	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala
		275					280					285			
Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Lys	Gly	Arg	Ala
	290					295					300				
Cys	Ile	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly
305					310					315					320
Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu
				325					330					335	
Asn	Gln	Gln	Phe	Val	Pro	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln
			340					345					350		
Gln	Glu	Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Gln	Val	Tyr	Gly	Ala	Pro
		355					360					365			
Gln	Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Gln	Lys	Glu	Leu	Gly
	370					375					380				
Glu	Val	Arg	Val	Gln	Tyr	Thr	Ser	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala
385					390					395					400
Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala
				405					410					415	
Gly	Tyr	Arg	Gly	Ile	Val	Thr	Phe	Gln	Phe	Arg	Gly	Arg	Arg	Val	His
			420					425					430		
Leu	Ala	Pro	Pro	Gln	Thr	Trp	Thr	Gly	Tyr	Asp	Pro	Ser	Trp	Asn	
		435					440					445			

<210> 8

eolf-seql

<211> 447

<212> PRT

<213> *Oryctolagus cuniculus*

<400> 8

```

Met Leu Lys Lys Gln Ser Ala Gly Leu Val Leu Trp Gly Ala Ile Leu
 1      5      10      15
Phe Val Ala Trp Asn Ala Leu Leu Leu Phe Phe Trp Thr Arg Pro
 20      25      30
Val Pro Ser Arg Leu Pro Ser Asp Asn Ala Leu Asp Asp Asp Pro Ala
 35      40      45
Ser Leu Thr Arg Glu Val Ile Arg Leu Ala Gln Asp Ala Glu Val Glu
 50      55      60
Leu Glu Arg Gln Arg Gly Leu Leu Gln Gln Ile Arg Glu His His Ala
 65      70      75      80
Leu Trp Ser Gln Arg Trp Lys Val Pro Thr Ala Ala Pro Pro Ala Gln
 85      90      95
Pro His Val Pro Val Thr Pro Pro Pro Ala Val Ile Pro Ile Leu Val
 100      105      110
Ile Ala Cys Asp Arg Ser Thr Val Arg Arg Cys Leu Asp Lys Leu Leu
 115      120      125
His Tyr Arg Pro Ser Ala Glu Leu Phe Pro Ile Ile Val Ser Gln Asp
 130      135      140
Cys Gly His Glu Glu Thr Ala Gln Val Ile Ala Ser Tyr Gly Ser Ala
 145      150      155      160
Val Thr His Ile Arg Gln Pro Asp Leu Ser Asn Ile Ala Val Gln Pro
 165      170      175
Asp His Arg Lys Phe Gln Gly Tyr Tyr Lys Ile Ala Arg His Tyr Arg
 180      185      190
Trp Ala Leu Gly Gln Ile Phe His Asn Phe Asn Tyr Pro Ala Ala Val
 195      200      205
Val Val Glu Asp Asp Leu Glu Val Ala Pro Asp Phe Phe Glu Tyr Phe
 210      215      220
Gln Ala Thr Tyr Pro Leu Leu Lys Ala Asp Pro Ser Leu Trp Cys Val
 225      230      235      240
Ser Ala Trp Asn Asp Asn Gly Lys Glu Gln Met Val Asp Ser Ser Lys
 245      250      255
Pro Glu Leu Leu Tyr Arg Thr Asp Phe Phe Pro Gly Leu Gly Trp Leu
 260      265      270
Leu Leu Ala Glu Leu Trp Ala Glu Leu Glu Pro Lys Trp Pro Lys Ala
 275      280      285
Phe Trp Asp Asp Trp Met Arg Arg Pro Glu Gln Arg Lys Gly Arg Ala
 290      295      300
Cys Val Arg Pro Glu Ile Ser Arg Thr Met Thr Phe Gly Arg Lys Gly
 305      310      315      320
Val Ser His Gly Gln Phe Phe Asp Gln His Leu Lys Phe Ile Lys Leu
 325      330      335
Asn Gln Gln Phe Val Pro Phe Thr Gln Leu Asp Leu Ser Tyr Leu Gln
 340      345      350
Gln Glu Ala Tyr Asp Arg Asp Phe Leu Ala Arg Val Tyr Gly Ala Pro
 355      360      365
Gln Leu Gln Val Glu Lys Val Arg Thr Asn Asp Arg Lys Glu Leu Gly
 370      375      380
Glu Val Arg Val Gln Tyr Thr Gly Arg Asp Ser Phe Lys Ala Phe Ala
 385      390      395      400
Lys Ala Leu Gly Val Met Asp Asp Leu Lys Ser Gly Val Pro Arg Ala
 405      410      415
Gly Tyr Arg Gly Ile Val Thr Phe Leu Phe Arg Gly Arg Arg Val His
 420      425      430
Leu Ala Pro Gln Thr Trp Asp Gly Tyr Asp Pro Ser Trp Thr
 435      440      445

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<210> 9

<211> 447

<212> PRT

<213> *Mesocricetus auratus*

eolf-seql

<400> 9

```

Met Leu Lys Lys Gln Ser Ala Gly Leu Val Leu Trp Gly Ala Ile Ile
 1      5      10      15
Phe Val Gly Trp Asn Ala Leu Leu Leu Leu Phe Phe Trp Thr Arg Pro
 20      25      30
Ala Pro Gly Arg Pro Pro Leu Asp Ser Ala Leu Asp Asp Asp Pro Ala
 35      40      45
Ser Leu Thr Arg Glu Val Ile Arg Leu Ala Glu Asp Ala Glu Val Glu
 50      55      60
Leu Glu Arg Gln Arg Gly Leu Leu Gln Gln Ile Arg Glu His His Thr
 65      70      75      80
Leu Trp Asn Gln Arg Trp Lys Val Pro Thr Val Ala Pro Pro Ala Trp
 85      90      95
Pro Arg Val Pro Val Thr Pro Ser Pro Pro Val Ile Pro Ile Leu Val
100      105      110
Ile Ala Cys Asp Arg Ser Thr Val Arg Arg Cys Leu Asp Lys Leu Leu
115      120      125
His Tyr Arg Pro Ser Ala Glu His Phe Pro Ile Ile Val Ser Gln Asp
130      135      140
Cys Gly His Glu Glu Thr Ala Gln Val Ile Ala Ser Tyr Gly Ser Ala
145      150      155      160
Val Thr His Ile Arg Gln Pro Asp Leu Ser Asn Ile Ala Val Gln Pro
165      170      175
Asp His Arg Lys Phe Gln Gly Tyr Tyr Lys Ile Ala Arg His Tyr Arg
180      185      190
Trp Ala Leu Gly Gln Ile Phe Asn Lys Phe Lys Phe Pro Ala Ala Val
195      200      205
Val Val Glu Asp Asp Leu Glu Val Ala Pro Asp Phe Phe Glu Tyr Phe
210      215      220
Gln Ala Thr Tyr Pro Leu Leu Arg Thr Asp Pro Ser Leu Trp Cys Val
225      230      235      240
Ser Ala Trp Asn Asp Asn Gly Lys Glu Gln Met Val Asp Ser Ser Lys
245      250      255
Pro Glu Leu Leu Tyr Arg Thr Asp Phe Phe Pro Gly Leu Gly Trp Leu
260      265      270
Leu Leu Ala Glu Leu Trp Ala Glu Leu Glu Pro Lys Trp Pro Lys Ala
275      280      285
Phe Trp Asp Asp Trp Met Arg Arg Pro Glu Gln Arg Lys Gly Arg Ala
290      295      300
Cys Ile Arg Pro Glu Ile Ser Arg Thr Met Thr Phe Gly Arg Lys Gly
305      310      315      320
Val Ser His Gly Gln Phe Phe Asp Gln His Leu Lys Phe Ile Lys Leu
325      330      335
Asn Gln Gln Phe Val Ser Phe Thr Gln Leu Asp Leu Ser Tyr Leu Gln
340      345      350
Arg Glu Ala Tyr Asp Arg Asp Phe Leu Ala Arg Val Tyr Gly Ala Pro
355      360      365
Leu Leu Gln Val Glu Lys Val Arg Thr Asn Asp Gln Lys Glu Leu Gly
370      375      380
Glu Val Arg Val Gln Tyr Thr Ser Arg Asp Ser Phe Lys Ala Phe Ala
385      390      395      400
Lys Ala Leu Gly Val Met Asp Asp Leu Lys Ser Gly Val Pro Arg Ala
405      410      415
Gly Tyr Arg Gly Ile Val Thr Phe Gln Phe Arg Gly Arg Arg Val His
420      425      430
Leu Ala Pro Pro Arg Ser Trp Glu Gly Tyr Asp Pro Ser Trp Thr
435      440      445

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<210> 10

<211> 445

<212> PRT

<213> Ailuropoda melanoleuca

<400> 10

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Met Leu Lys Lys Gln Ser Ala Gly Leu Val Leu Trp Gly Ala Ile Leu
 1      5      10      15
Phe Val Ala Trp Asn Ala Leu Leu Leu Leu Phe Phe Trp Thr Arg Pro

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eol f-seql

			20					25					30		
Ser	Pro	Gly	Arg	Leu	Pro	Ser	Glu	Ser	Ala	Leu	Asp	Asp	Asp	Pro	Ala
		35					40					45			
Val	Leu	Thr	Arg	Glu	Val	Ile	Arg	Leu	Ala	Glu	Asp	Ala	Glu	Val	Glu
	50					55					60				
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Arg	Glu	His	His	Ala
65					70					75					80
Arg	Trp	Ser	Gln	Arg	Trp	Arg	Ala	Pro	Thr	Ala	Thr	Val	Pro	Ala	Pro
				85					90					95	
Ala	Pro	Ala	Ser	Asn	Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	Ile	Ala
			100					105					110		
Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	His	Tyr
		115					120					125			
Arg	Pro	Ser	Ala	Glu	His	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys	Gly
	130					135					140				
His	Glu	Glu	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	Val	Thr
145					150					155					160
His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro	Asp	His
				165					170					175	
Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	Trp	Ala
			180					185					190		
Leu	Gly	Gln	Val	Phe	His	Arg	Phe	Lys	Phe	Pro	Ala	Ala	Val	Val	Val
		195					200					205			
Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Gln	Ala
	210					215					220				
Thr	Tyr	Pro	Leu	Leu	Arg	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	Ser	Ala
225					230					235					240
Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ser	Ser	Lys	Pro	Glu
				245					250					255	
Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	Leu	Leu
			260					265					270		
Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Arg	Ala	Phe	Trp
		275					280					285			
Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala	Cys	Val
	290					295					300				
Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	Val	Ser
305					310					315					320
His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	Asn	Gln
				325					330					335	
His	Phe	Val	Pro	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Arg	Gln	Glu
			340					345					350		
Thr	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro	Leu	Leu
		355					360					365			
Gln	Val	Glu	Lys	Val	Arg	Thr	Ser	Glu	Arg	Asn	Glu	Leu	Gly	Glu	Val
	370														

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<210> 11
<211> 447
<212> PRT
<213> Sus scrofa
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<400> 11															
Met	Leu	Lys	Lys	Gln	Ser	Ala	Gly	Leu	Val	Leu	Trp	Gly	Ala	Ile	Leu
1				5					10					15	
Phe	Val	Ala	Trp	Asn	Ala	Leu	Leu	Leu	Leu	Phe	Phe	Trp	Thr	Arg	Pro
			20					25					30		
Ala	Pro	Gly	Arg	Leu	Pro	Ser	Asp	Ser	Ala	Leu	Asp	Asp	Asp	Pro	Ala
		35					40					45			
Ser	Leu	Thr	Arg	Glu	Val	Ile	Arg	Leu	Ala	Gln	Asp	Ala	Glu	Val	Glu

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50	Leu	Glu	Arg	Gln	Arg	Gly	55	Leu	Leu	Gln	Gln	Ile	60	Glu	His	His	Ala
65	Arg	Trp	Ser	Gln	Arg	Trp	70	Arg	Val	Pro	Thr	75	Val	Ala	Pro	Pro	Val
				85	Val	Thr		Ser	Ala	Pro	Thr	90	Val	Ile	Pro	Ile	Leu
			100						105							110	
	Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Leu	Lys	Leu	Leu
			115						120								
	His	Tyr	Arg	Pro	Ser	Ala	Glu	His	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	
			130						135								
	Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	
	145						150					155				160	
	Val	Thr	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Asn	Ile	Val	Val	Pro	Pro	
				165						170						175	
	Asp	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	
			180						185							190	
	Trp	Ala	Leu	Gly	Gln	Val	Phe	Glu	Lys	Phe	Lys	Phe	Ser	Ala	Ala	Val	
			195						200								
	Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	
			210						215								
	Gln	Ala	Thr	Tyr	Pro	Leu	Leu	Arg	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	
	225						230									240	
	Ser	Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ser	Ser	Lys	
				245						250						255	
	Pro	Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	
				260					265								
	Leu	Leu	Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	
			275						280								
	Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala	
			290				295						300				
	Cys	Val	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	
	305						310									320	
	Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	
					325					330						335	
	Asn	Gln	His	Phe	Val	Pro	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Arg	
				340					345							350	
	Arg	Glu	Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro	
			355					360									
	Leu	Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Ser	Glu	Arg	Ser	Glu	Leu	Gly	
			370					375									
	Glu	Val	Arg	Val	Gln	Tyr	Thr	Ser	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala	
	385						390									400	
	Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala	
					405					410						415	
	Gly	Tyr	Arg	Gly	Ile	Val	Ser	Phe	Leu	Phe	Arg	Gly	Arg	Arg	Val	Tyr	
				420					425							430	
	Leu	Ala	Pro	Pro	Glu	Thr	Trp	Asp	Gly	Tyr	Asp	Pro	Ser	Trp	Asn		
			435					440						445			

<210> 12

<211> 447

<212> PRT

<213> Canis familiaris

<400> 12

Met	Leu	Lys	Lys	Gln	Ser	Ala	Gly	Leu	Val	Leu	Trp	Gly	Ala	Ile	Leu
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Phe	Val	Ala	Trp	Asn	Ala	Leu	Leu	Leu	Leu	Phe	Phe	Trp	Thr	Arg	Pro
			20					25					30		
Ser	Pro	Ser	Arg	Leu	Pro	Ser	Asp	Ser	Ala	Leu	Asp	Asp	Asp	Pro	Ala
		35					40					45			
Ser	Leu	Thr	Arg	Glu	Val	Ile	Arg	Leu	Ala	Glu	Asp	Ala	Glu	Val	Glu
		50				55					60				
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Arg	Glu	His	His	Ala
65					70					75					80
Arg	Trp	Ser	Gln	Arg	Trp	Arg	Val	Pro	Thr	Ala	Ala	Pro	Pro	Ala	Pro

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Pro	Arg	Val	Pro	85	Val	Ser	Ser	Pro	Pro	90	Ala	Val	Ile	Pro	Ile	95	Leu	Val
Ile	Ala	Cys	100	Asp	Arg	Ser	Thr	Val	105	Arg	Arg	Cys	Leu	Asp	110	Lys	Leu	Leu
His	Tyr	115	Arg	Pro	Ser	Ala	Glu	120	His	Phe	Pro	Ile	Ile	125	Val	Ser	Gln	Asp
Cys	Gly	130	His	Glu	Glu	Thr	135	Ala	Gln	Val	Ile	Ala	Ser	140	Tyr	Gly	Ser	Ala
145	Ile	Thr	His	Ile	Arg	Gln	150	Pro	Asp	Leu	Ser	Ser	Ile	155	Thr	Val	Pro	Pro
Asp	His	Arg	160	Lys	Phe	Gln	Gly	Tyr	165	Tyr	Lys	Ile	Ala	170	Arg	His	Tyr	Arg
Trp	Ala	Leu	180	Gly	Gln	Val	Phe	His	185	Lys	Phe	Lys	Phe	190	Pro	Ala	Ala	Val
Val	Val	Glu	195	Asp	Asp	Leu	Glu	Val	200	Ala	Pro	Asp	Phe	205	Phe	Glu	Tyr	Phe
Gln	Ala	Thr	210	Tyr	Pro	Leu	215	Leu	Arg	Ala	Asp	Pro	Ser	220	Leu	Trp	Cys	Val
225	Ser	Ala	Trp	Asn	230	Asn	Gly	Lys	Glu	Gln	235	Met	Val	240	Asp	Ser	Ser	Lys
Pro	Glu	Leu	245	Tyr	Arg	Thr	Asp	Phe	250	Phe	Pro	Gly	Leu	255	Gly	Trp	Leu	
Leu	Leu	Ala	260	Glu	Leu	Trp	Ala	Glu	265	Leu	Glu	Pro	Lys	270	Trp	Pro	Arg	Ala
Phe	Trp	275	Asp	Asp	Trp	Met	Arg	280	Arg	Pro	Glu	Gln	Arg	285	Gln	Gly	Arg	Ala
Cys	Val	290	Arg	Pro	Glu	Ile	Ser	295	Arg	Thr	Met	Thr	Phe	300	Gly	Arg	Lys	Gly
305	Val	Ser	His	Gly	Gln	Phe	Phe	310	Asp	Gln	His	Leu	Lys	315	Phe	Ile	Lys	Leu
Asn	Gln	His	320	Phe	Val	Pro	Phe	325	Thr	Gln	Leu	Asp	Leu	330	Ser	Tyr	Leu	Arg
Gln	Glu	Thr	340	Tyr	Asp	Arg	Asp	345	Phe	Leu	Ala	Arg	Val	350	Tyr	Gly	Ala	Pro
Leu	Leu	Gln	355	Val	Glu	Lys	Val	360	Arg	Thr	Ser	Glu	Arg	365	Ser	Glu	Leu	Gly
Glu	Val	Arg	370	Val	Gln	Tyr	375	Thr	Gly	Arg	Asp	Ser	Phe	380	Lys	Ala	Phe	Ala
385	Lys	Ala	Leu	Gly	Val	Met	Asp	390	Asp	Leu	Lys	Ser	Gly	395	Val	Pro	Arg	Ala
Gly	Tyr	Arg	400	Gly	Ile	Val	Ser	405	Phe	Leu	410	Arg	Gly	415	Arg	Arg	Val	His
Leu	Ala	Pro	420	Pro	Gln	Thr	Trp	425	Gly	Tyr	Asp	Pro	Ser	430	Trp	Asn		
		435						440						445				

<210> 13
 <211> 447
 <212> PRT
 <213> Bos taurus

<400> 13

Met	Leu	Lys	Lys	5	Ser	Ala	Gly	Leu	10	Val	Leu	Trp	Gly	Ala	Ile	Leu
1	Phe	Val	Ala	20	Asn	Ala	Leu	Leu	25	Leu	Phe	Phe	Trp	Thr	Arg	Pro
Ala	Pro	Gly	Arg	35	Leu	Pro	Ser	Asp	40	Ser	Ala	Leu	Asp	Asp	Pro	Ala
Ser	Leu	Thr	Arg	50	Glu	Val	Ile	Arg	55	Leu	Ala	Gln	Asp	Ala	Glu	Val
Leu	Glu	Arg	Gln	65	Arg	Gly	Leu	Leu	70	Gln	Gln	Ile	Arg	Glu	His	Ala
Arg	Trp	Ser	Gln	85	Trp	Arg	Val	Pro	90	Thr	Val	Ala	Pro	Pro	Val	Pro
Pro	Arg	Val	Pro	100	Val	Thr	Thr	Pro	105	Pro	Ala	Val	Ile	Pro	Ile	Leu
Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	

eo1f-seql

Asn	Tyr	115	Pro	Ser	Ala	Glu	120	Phe	Pro	Ile	Ile	125	Val	Ser	Gln	Asp
	130	Arg					135					140				
Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	
145					150					155					160	
Val	Met	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Thr	Ile	Ala	Val	Pro	Pro	
				165					170					175		
Asp	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	
			180					185					190			
Trp	Ala	Leu	Gly	Gln	Val	Phe	His	Glu	Phe	Lys	Phe	Pro	Ala	Ala	Val	
		195					200					205				
Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	
	210					215					220					
Gln	Ala	Thr	Tyr	Pro	Leu	Leu	Arg	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	
225					230					235					240	
Ser	Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ser	Ser	Lys	
			245						250					255		
Pro	Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	
			260					265					270			
Leu	Leu	Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	
		275					280					285				
Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala	
	290					295					300					
Cys	Val	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	
305					310					315					320	
Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	
				325					330					335		
Asn	Gln	His	Phe	Val	Pro	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Arg	
			340					345					350			
Gln	Glu	Thr	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro	
		355					360					365				
Leu	Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Ser	Glu	Arg	Ser	Glu	Leu	Gln	
	370					375					380					
Glu	Val	Arg	Val	Gln	Tyr	Thr	Ser	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala	
385					390					395					400	
Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala	
				405					410					415		
Gly	Tyr	Arg	Gly	Ile	Val	Ser	Phe	Leu	Tyr	Arg	Gly	Arg	Arg	Val	His	
			420					425					430			
Leu	Ala	Pro	Pro	Gln	Thr	Trp	Asp	Gly	Tyr	Asp	Pro	Ser	Trp	Asn		
		435					440					445				

<210> 14

<211> 447

<212> PRT

<213> Equus caballus

<400> 14

Met	Leu	Lys	Lys	Gln	Ser	Ala	Gly	Leu	Val	Leu	Trp	Gly	Ala	Ile	Leu	
1				5					10					15		
Phe	Val	Ala	Trp	Asn	Ala	Leu	Leu	Leu	Leu	Phe	Phe	Trp	Met	Arg	Pro	
			20					25					30			
Ser	Pro	Ser	Arg	Leu	Pro	Ser	Asp	Gly	Thr	Leu	Asp	Asp	Asp	Pro	Thr	
		35					40					45				
Gly	Leu	Thr	Arg	Lys	Val	Ile	His	Leu	Ala	Gln	Asp	Val	Glu	Val	Glu	
	50					55					60					
Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Arg	Glu	His	His	Ala	
65					70					75					80	
Arg	Trp	Ser	Gln	Trp	Arg	Val	Pro	Thr	Val	Pro	Pro	Pro	Pro	Val	Pro	
				85				90						95		
Pro	His	Val	Ser	Val	Thr	Ser	Leu	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	
			100					105					110			
Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	
		115					120					125				
His	Tyr	Arg	Pro	Ser	Ala	Glu	His	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	
	130					135					140					
Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	

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145	Val	Thr	His	Ile	Arg	150	Gln	Pro	Asp	Leu	Ser	155	Asn	Ile	Ala	Val	Pro	160	Pro
	Asp	His	Arg	Lys	165	Phe	Gln	Gly	Tyr	Tyr	170	Lys	Ile	Ala	Arg	His	175	Tyr	Arg
	Trp	Ala	Leu	180	Ala	Gln	Val	Phe	His	185	Arg	Phe	Lys	Phe	Pro	190	Ala	Ala	Val
	Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	200	Phe	Phe	Glu	Tyr	Phe		
	Gln	Ala	Thr	Tyr	Pro	Leu	Leu	Arg	Ala	Asp	Pro	220	Ser	Leu	Trp	Cys	Val		
225	Ser	Ala	Trp	Asn	230	Asn	Gly	Lys	Glu	Gln	235	Met	Val	Asp	Ser	Ser	Lys		
	Pro	Glu	Leu	Leu	245	Tyr	Arg	Thr	Asp	Phe	250	Phe	Pro	Gly	Leu	Gly	Trp	Leu	
	Leu	Leu	Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala			
	Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala			
	Cys	Val	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	300	Phe	Gly	Arg	Ile	Gly		
305	Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu			
	Asn	Gln	His	Phe	Val	Pro	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Arg			
	Gln	Glu	Ala	Tyr	Asp	Lys	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro			
	Leu	Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Gly	Glu	Arg	Ser	Glu	Leu	Gly			
	Glu	Val	Arg	Val	Gln	Tyr	Thr	Gly	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala			
385	Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala			
	Gly	Tyr	Arg	Gly	Ile	Val	Ser	Phe	Leu	Phe	Arg	Gly	Arg	Arg	Val	His			
	Leu	Ala	Pro	Pro	Gln	Thr	Trp	Glu	Gly	Tyr	Asp	Pro	Ser	Trp	Asn				
			435					440					445						

<210> 15

<211> 447

<212> PRT

<213> Monodelphis domestica

<400> 15

Met	Leu	Lys	Lys	Gln	Ser	Ala	Gly	Leu	Val	Leu	Trp	Gly	Ala	Ile	Leu
1	Phe	Val	Ala	Trp	Asn	Ala	Leu	Leu	10	Phe	Phe	Phe	Trp	Ala	Arg
			20					25					30		Pro
	Leu	Pro	Gly	Gly	Pro	Ser	Ser	Glu	Asp	Pro	Phe	Ala	Asn	Asp	Pro
			35					40					45		Ala
	Ser	Leu	Ser	Arg	Arg	Val	Ile	Arg	Leu	Ala	Gln	Glu	Ala	Glu	Ile
			50				55					60			Glu
	Leu	Glu	Arg	Gln	His	Val	Leu	Leu	Gln	Gln	Ile	Gln	Lys	His	Ser
65					70					75					80
	Leu	Trp	Asn	Gln	Arg	Gln	Gln	Val	Ala	Thr	Ala	Gly	Pro	Pro	Ala
			85						90					95	Val
	Ser	His	Pro	Thr	Val	Ala	Pro	Thr	Thr	Phe	Val	Leu	Pro	Ile	Leu
			100					105					110		Val
	Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu
			115				120					125			Leu
	His	Tyr	Arg	Pro	Ser	Ala	Glu	Arg	Phe	Pro	Ile	Ile	Val	Ser	Gln
			130				135					140			Asp
	Cys	Gly	His	Lys	Val	Thr	Ala	Gln	Val	Ile	Ala	Ser	Tyr	Gly	Asn
145					150					155					Ala
	Ile	Met	His	Ile	Lys	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Pro	Val	Pro
				165						170					Thr
	Glu	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr
								440					445		Arg

eo1f-seq1

Trp	Ala	Leu	180	Asn	Gln	Val	Phe	Arg	185	Thr	Phe	Lys	Tyr	Gln	190	Ala	Ala	Val
Val	Val	Glu	195	Asp	Asp	Leu	Glu	Val	200	Ala	Pro	Asp	Phe	205	Phe	Glu	Tyr	Phe
Gln	Ala	Thr	210	Tyr	Pro	Leu	Leu	Arg	215	Thr	Asp	Pro	Ser	220	Leu	Trp	Cys	Val
225	Ser	Ala	Trp	Asn	Asp	230	Asn	Gly	Lys	Glu	Gln	Met	Val	235	Asp	Ala	Lys	Arg
Pro	Asp	Leu	Leu	Tyr	Arg	245	Thr	Asp	Phe	250	Phe	Pro	Gly	Leu	Gly	Trp	Leu	
Leu	Leu	Ala	260	Glu	Leu	Trp	Asp	Glu	265	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	
Phe	Trp	Asp	275	Asp	Trp	Met	Arg	Gln	280	Pro	Glu	Gln	Arg	285	Arg	Asp	Arg	Ala
290	Cys	Leu	Arg	Pro	Glu	Ile	Ser	Arg	295	Thr	Met	Thr	Phe	300	Gly	Arg	Lys	Gly
305	Val	Ser	Gln	Gly	Gln	Phe	Phe	Asp	310	Gln	His	Leu	Lys	315	Phe	Ile	Lys	Leu
Asn	Gln	Gly	Phe	Val	Phe	Phe	Thr	Gln	325	Leu	Asp	Leu	Ser	330	Tyr	Leu	Lys	
Gln	Glu	Ala	340	Tyr	Asp	Arg	Asp	Phe	345	Ser	Ala	Arg	Val	350	Tyr	Ala	Ala	Pro
Gln	Val	Gln	355	Val	Glu	Glu	Leu	Lys	360	Ser	Asn	Gln	Lys	365	Gln	Glu	Leu	Gly
370	Glu	Val	Arg	Val	Gln	Tyr	Arg	Gly	375	Arg	Asp	Ser	Phe	380	Arg	Ala	Phe	Ala
385	Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	390	Leu	Lys	Ser	Gly	395	Val	Pro	Arg	Ala
Ser	Tyr	Arg	Gly	Ile	Val	Ser	Phe	Leu	405	Phe	Arg	Gly	Arg	410	Arg	Val	Tyr	
Leu	Ala	Pro	420	Pro	Gln	Asp	Trp	Thr	425	Gly	Tyr	Asp	Pro	430	Ser	Trp	Ser	
			435						440					445				

<210> 16

<211> 438

<212> PRT

<213> Salmo salar

<400> 16

Met	Leu	Arg	Lys	Arg	Gly	Ser	Ala	Ile	Leu	Cys	Gly	Ala	Phe	Leu	Phe			
1	Val	Ala	Trp	Asn	Ala	Val	Val	Val	Leu	10	Tyr	Leu	Trp	Gly	Arg	15	Pro	Leu
Ser	Gly	Arg	Glu	Glu	Arg	Glu	Met	Asp	25	Gly	Gly	Arg	Gly	Gly	Ala	Asp		
Leu	Ala	Gly	Asp	Val	Ile	His	Met	Ala	40	Glu	Ala	Phe	Glu	Ala	Glu	Leu		
50	Glu	Met	Gln	Arg	Lys	Ile	Leu	Leu	55	Gln	Ile	Gln	Gly	His	Arg	Ser	Leu	
65	Trp	Glu	Gln	Pro	Asn	Glu	Asn	Gly	70	Ala	Ser	Arg	Ile	Gly	Pro	Pro	Gln	
Val	Val	Ile	Pro	Ile	Leu	Val	Ile	Ala	85	Cys	Asn	Arg	Val	Thr	Val	Lys		
Arg	Cys	Leu	Asp	Lys	Leu	Leu	Glu	Tyr	100	Arg	Pro	Ser	Ala	Glu	Leu	Tyr		
Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys	Gly	115	His	Ala	Glu	Thr	Ala	Gln	Val		
Ile	Gly	Ser	Tyr	Gly	Ser	Gln	Val	Thr	120	His	Leu	Lys	Gln	Pro	Asp	Leu		
145	Ser	Asp	Ile	Ala	Val	Arg	Pro	Glu	135	Lys	Lys	Phe	Gln	Gly	Tyr	Tyr		
Lys	Ile	Ser	Arg	His	Tyr	Arg	Trp	Ala	150	Leu	Asn	Gln	Val	Phe	Asn	Ser		
Leu	Ser	His	Ser	Ser	Val	Val	Ile	Val	165	Glu	Asp	Asp	Leu	Glu	Val	Ala		
Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Arg	Ser	180	Leu	His	Pro	Ile	Leu	Lys	Ser		
									195									
									200									
									205									

eolf-seql

Val	Asp	Pro	Gly	245	Lys	Ala	Ser	Leu	Leu	250	Tyr	Arg	Thr	Asp	Phe	255	Pro
Gly	Leu	Gly	Trp	260	Met	Leu	Thr	Lys	265	Asp	Leu	Trp	Ala	Glu	270	Leu	Glu
Lys	Trp	Pro	Ala	275	Ser	Phe	Trp	280	Asp	Asp	Trp	Met	Arg	285	His	Pro	Asp
Arg	305	Lys	Asp	Arg	Ser	Cys	310	Ile	Arg	Pro	Glu	Ile	315	Ser	Arg	Thr	Leu
Phe	Gly	Arg	Lys	Gly	325	Val	Ser	Leu	Gly	Gln	330	Phe	Tyr	Asp	Lys	Tyr	320
Arg	Phe	Ile	Lys	340	Leu	Asn	Thr	Glu	Phe	345	Val	Pro	Phe	Thr	Lys	Met	335
Leu	Ser	Tyr	355	Leu	Glu	Lys	Glu	Lys	360	Tyr	Asp	Glu	Ser	Phe	365	Glu	Lys
Val	Tyr	Ala	Ala	Ser	Leu	Val	Thr	Leu	Glu	Asp	Leu	Lys	Ser	Gly	Lys		
Leu	385	Ser	Gly	Ser	Gly	Pro	390	Phe	Arg	Val	Gln	Tyr	Ser	Ser	Pro	Asp	340
Phe	Lys	Ser	Leu	Ala	405	Arg	Asn	Leu	Gly	Val	410	Met	Asp	Asp	Leu	Lys	400
Gly	Val	Pro	Arg	Ala	Gly	Tyr	Arg	Gly	Ala	Val	Ser	Phe	Leu	Leu	Arg		
Gly	Lys	Arg	Val	Tyr	Leu	Ala	Pro	440	Pro	Ala	Gly	Trp	Ser	445	Arg	Tyr	415
Pro	Ser	Trp	Ser														

<210> 18
 <211> 448
 <212> PRT
 <213> Xenopus laevis

<400> 18

Met	Pro	Arg	Lys	Val	Ser	Val	Ala	Ala	Trp	Gly	Ala	Ala	Leu	Phe	Ile		
1	Ser	Trp	Asn	Ala	5	Ile	Leu	Leu	Leu	25	Leu	Met	Ser	Arg	Ser	Arg	Gly
Thr	Asp	His	Ser	Asp	Leu	Thr	Ala	His	Val	Ile	Gln	Leu	Ala	Glu	Ala		
Ala	Glu	Ala	Glu	Leu	Glu	Lys	Gln	Lys	Gly	Leu	Leu	Gln	Gln	Ile	His		
His	65	Tyr	Ser	Gly	Leu	Leu	70	Asn	Gln	Gln	Gln	Pro	Ser	Ser	His	Val	Arg
Leu	Ala	Pro	Leu	Met	Pro	Ile	Lys	Asn	Leu	Asn	Val	Ser	Ser	Pro	Phe		
Pro	Ser	Pro	Val	85	Gly	Ser	Gly	Pro	Leu	Pro	Leu	Val	Ile	Pro	Ile	Leu	
Val	Val	Ala	Cys	100	Asp	Arg	Pro	Ser	Val	Arg	Arg	Cys	Leu	Asp	Ser	Leu	
Leu	Lys	Tyr	Arg	Pro	Ser	Ala	Glu	Lys	Phe	Pro	Ile	Ile	Val	Ser	Gln		
Asp	145	Cys	Gly	His	Glu	Glu	150	Thr	Gly	Lys	Val	Ile	Asp	Ser	Tyr	Gly	Asp
Ala	Val	Thr	His	Ile	Lys	Gln	Pro	Asp	Leu	Ser	Glu	Val	Ala	Val	Pro		
Pro	Glu	His	Arg	165	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ser	Arg	His	Tyr	
Arg	Trp	Ala	Leu	Asn	Gln	Ile	Phe	Lys	Ser	Met	Gly	Tyr	Lys	Ala	Ala		
Ile	Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Tyr	Glu	Tyr		
Phe	225	Gln	Ala	Thr	Leu	Pro	230	Leu	Leu	Gln	Lys	Asp	Arg	Met	Leu	Trp	Cys
Val	Ser	Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Ala	Leu	Ile	Asp	Pro	Gly		
Gly	Thr	Ser	Leu	Leu	Tyr	Arg	Ser	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp		

colf-seql

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Leu Leu Leu 260 Glu Leu Trp Glu 265 Leu Glu Pro Lys 270 Trp Pro Ser
275
Ala Phe Trp Asp Asp Trp Val Arg Arg Pro Glu Gln Arg Leu Asp Arg
290
Ala Cys Val Arg Pro Glu Leu Ser Arg Thr Arg Thr Phe Gly Arg Lys
305
Gly Val Ser Gln Gly Gln Phe Phe Asp Gln His Leu Arg Phe Ile Lys
325
Leu Asn Gln Asp Leu Val Pro Phe Thr Lys Met Asp Leu Ser Tyr Leu
340
Leu Lys Asp Thr Tyr Asp Pro Trp Phe Leu Glu Gln Val Tyr Gly Ala
355
Pro Lys Ala Arg Ala Glu Glu Val Leu His Gly Gln Val Pro Gly Gly
370
Arg Thr Val Arg Val Glu Tyr Thr Thr Lys Asp Thr Phe Lys Ala Met
385
Ala Arg Ala Phe Gly Val Met Glu Asp Leu Lys Ser Gly Val Ala Arg
405
Ala Ala Tyr Lys Gly Val Val Ser Phe Ser His Arg Gly Arg Arg Val
420
Phe Leu Ala Pro Pro Lys Asp Trp Thr Gly Tyr Asp Pro Leu Trp Asn
435
440
445

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<210> 19

<211> 458

<212> PRT

<213> Drosophila melanogaster

<400> 19

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Met Arg Thr Arg Lys Val Leu Leu Val Ile Gly Phe Leu Val Thr Trp
1
Thr Tyr Ala Thr Tyr Tyr Leu Leu Leu Arg Gln Thr Gly Ile His Thr
20
Ser Arg His Gln Ser Leu Gln Ala Tyr Lys Leu Asn Ser Gln Ala Arg
35
Asp Ala Asn Met Gln Ser His His Leu Ala Lys Asn Val Phe Glu Phe
50
Val Lys Leu Lys Tyr Leu Glu Lys Gln Pro Pro Ser Val Ala Ser Thr
65
Pro Gln Ile Ser Ile Ile Ala Ala Glu Ile Ser Ala Glu Leu Pro Glu
80
Gln His Val Ala Lys Ser Ala Thr Ala Arg Ile Pro Thr Lys Thr Tyr
100
Leu Ala Asn Gly Glu Pro Val Phe Pro Val Val Val Phe Ala Cys Asn
115
Arg Val Ser Val Lys Lys Cys Ile Asp Asn Leu Val Gln Tyr Arg Pro
130
Ser Val Glu Gln Phe Pro Ile Ile Val Ser Gln Asp Cys Gly Asp Glu
145
Pro Thr Lys Glu Ala Ile Leu Ser Tyr Gly Lys Gln Val Thr Leu Ile
165
Glu Gln Pro Asp Leu Ser Asp Ile Thr Val Leu Pro Lys Glu Lys Lys
180
Phe Lys Gly Tyr Tyr Lys Ile Ala Arg His Tyr Gly Trp Ala Leu Asn
195
Thr Thr Phe Ala Val Gly Phe Glu Phe Val Ile Ile Val Glu Asp Asp
210
Leu Asn Val Ala Pro Asp Phe Phe Glu Tyr Phe Leu Gly Thr His Lys
225
Leu Leu Lys Gln Asp Pro Ser Leu Trp Cys Val Ser Ala Trp Asn Asp
245
Asn Gly Lys Ala Ala Val Val Asp Ala Ala Gln Pro Glu Leu Leu Tyr
260
Arg Thr Asp Phe Phe Pro Gly Leu Gly Trp Met Leu Thr Lys Asp Leu
275
Trp Ala Glu Leu Ser Val Lys Trp Pro Lys Ser Phe Trp Asp Asp Trp
285

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colf-seql

290	Ile	Arg	His	Pro	Ala	Gln	295	Arg	Lys	Asp	Arg	Val	300	Cys	Ile	Arg	Pro	Glu	
305	Ile	Ser	Arg	Thr	Arg	Thr	310	Phe	Gly	Lys	Ile	Gly	315	Val	Ser	Asn	Gly	320	Leu
	Phe	Phe	Asp	Lys	Tyr	Leu	325	Lys	His	Ile	Lys	Leu	330	Ser	Glu	Asp	Phe	335	Val
	Gln	Phe	Thr	Lys	Ile	Asn	340	Met	Ser	Tyr	Leu	Leu	345	Lys	Asp	Asn	Tyr	350	Asp
	Asn	Thr	Phe	Leu	Arg	Arg	355	Val	Tyr	Thr	Tyr	Pro	360	Ile	Val	Thr	Tyr	365	Asp
	Glu	Leu	Arg	Arg	Asn	Leu	370	Ile	Arg	Ile	Glu	Gly	375	Pro	Val	Arg	Ile	380	Gln
385	Tyr	Thr	Thr	Arg	Glu	Gln	390	Tyr	Lys	Arg	Thr	Thr	395	Lys	Met	Leu	Gly	400	Leu
	Met	Asp	Asp	Phe	Lys	Ser	405	Gly	Val	Pro	Arg	Thr	410	Ala	Tyr	His	Gly	415	Ile
	Val	Ser	Phe	Tyr	Tyr	Asn	420	Lys	Arg	Arg	Val	His	425	Leu	Ala	Pro	Asn	430	Ala
	Asn	Trp	Lys	Gly	Tyr	Glu	435	Leu	Ser	Trp	Ser		440					445	
450							455												

<210> 20
 <211> 447
 <212> PRT
 <213> Homo sapiens

<400> 20	Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val
1	Val	Ala	Ala	Cys	5	Gly	Phe	Val	Leu	10	Trp	Ser	Ser	Asn	Gly	15
	Lys	Asn	Glu	Ala	20	Leu	Ala	Pro	Pro	25	Leu	Leu	Asp	Ala	Glu	30
	Gly	Ala	Gly	Gly	35	Arg	Gly	Gly	40	Asp	His	Pro	Ser	Val	Ala	45
	Arg	Arg	Val	Ser	50	Asn	Val	Ser	55	Ala	Ala	Ser	Leu	60	Val	65
65	Gln	Pro	Glu	Ala	70	Asp	Asn	Leu	75	Thr	Leu	Arg	Tyr	Arg	Ser	80
	Gln	Leu	Asn	Phe	85	Asp	Gln	Thr	90	Leu	Arg	Asn	Val	Asp	Lys	95
	Trp	Ala	Pro	Arg	100	Glu	Leu	Val	105	Leu	Val	Val	Gln	Val	His	110
	Glu	Tyr	Leu	Arg	115	Leu	Leu	Leu	120	Asp	Ser	Leu	Arg	Lys	Ala	125
	Asp	Asn	Val	Leu	130	Val	Ile	Phe	135	Ser	His	Asp	Phe	Trp	Ser	140
145	Asn	Gln	Leu	Ile	145	Ala	Gly	Val	150	Asn	Phe	Cys	Pro	Val	Leu	155
	Phe	Pro	Phe	Ser	165	Ile	Gln	Leu	170	Tyr	Pro	Asn	Glu	Phe	Pro	175
	Pro	Arg	Asp	Cys	180	Pro	Arg	Asp	185	Leu	Pro	Lys	Asn	Ala	Ala	190
	Gly	Cys	Ile	Asn	195	Ala	Glu	Tyr	200	Pro	Asp	Ser	Phe	Gly	His	205
	Ala	Lys	Phe	Ser	210	Gln	Thr	Lys	215	His	His	Trp	Trp	Trp	Lys	220
225	Val	Trp	Glu	Arg	225	Val	Lys	Ile	230	Leu	Arg	Asp	Tyr	Ala	Gly	235
	Phe	Leu	Glu	Glu	245	Asp	His	Tyr	250	Leu	Ala	Pro	Asp	Phe	Tyr	255
	Lys	Lys	Met	Trp	260	Lys	Leu	Lys	265	Gln	Gln	Glu	Cys	Pro	Glu	270
	Leu	Ser	Leu	Gly	275	Thr	Tyr	Ser	280	Ala	Ser	Arg	Ser	Phe	Tyr	285
	Asp	Lys	Val	Asp	290	Val	Lys	Thr	295	Trp	Lys	Ser	Thr	Glu	His	300

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305	Leu	Ala	Leu	Thr	Arg	310	Asn	Ala	Tyr	Gln	Lys	315	Leu	Ile	Glu	Cys	Thr	320	Asp
					325							330						335	
	Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr			
				340															
	Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln			
			355																
	Ile	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys			
		370																	
	Thr	Cys	Arg	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn			
						390													
	Asn	Asn	Lys	Gln	Tyr	Met	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys			
					405														
	Phe	Thr	Val	Val	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly			
				420															
	Asp	Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln				
			435					440						445					

<210> 21

<211> 447

<212> PRT

<213> Pan troglodytes

<400> 21

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val				
1				5					10					15					
Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	Ser	Ser	Asn	Gly	Arg	Gln	Arg				
			20					25					30						
Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Glu	Pro	Ala	Arg				
		35					40					45							
Gly	Ala	Gly	Gly	Arg	Gly	Gly	Asp	His	Pro	Ser	Val	Ala	Val	Gly	Ile				
	50					55					60								
Arg	Arg	Val	Ser	Asn	Val	Ser	Ala	Ala	Pro	Leu	Val	Pro	Ala	Val	Pro				
65				70						75					80				
Gln	Pro	Glu	Ala	Asp	Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr				
				85					90					95					
Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Ala	Gly	Thr				
			100					105					110						
Trp	Ala	Pro	Arg	Glu	Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg	Pro				
		115					120					125							
Glu	Tyr	Leu	Arg	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile				
	130					135					140								
Asp	Asn	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu	Ile				
145					150					155					160				
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asn	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe				
				165					170					175					
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser	Asp				
			180					185					190						
Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Pro	Lys	Asn	Ala	Ala	Leu	Lys	Leu				
		195					200					205							
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu				
	210					215					220								
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe				
225				230							235				240				
Val	Trp	Glu	Arg	Val	Lys	Ile	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Val	Leu				
				245					250					255					
Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe				
			260					265					270						
Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Glu	Cys	Pro	Glu	Cys	Asp	Val					
		275					280					285							
Leu	Ser	Leu	Gly	Thr	Tyr	Ser	Ala	Ser	Arg	Ser	Phe	Tyr	Gly	Met	Ala				
	290					295					300								
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly				
305					310					315					320				
Leu	Ala	Leu	Thr	Arg	Asn	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp				
				325					330					335					
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr				

eo1f-seq1

Leu	Thr	Val	340	Cys	Leu	Pro	Lys	345	Phe	Trp	Lys	Val	Leu	350	Val	Pro	Gln
		355	Ser				360	Gly	Asp	Cys	Gly	Met	His	365	His	Lys	Lys
Val	Pro	Arg	Ile	Phe	His	Ala	375	Gln	Ser	Ala	Gln	Ile	Glu	380	Ser	Leu	Leu
Thr	Cys	Arg	Pro	Ser	Thr	390	Met	Phe	Pro	Glu	Thr	Leu	Thr	395	Ile	Ser	Glu
385	Asn	Asn	Lys	Gln	Tyr	405	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp
			420	Asp	His	Glu	Leu	Cys	440	Lys	Ser	Tyr	Arg	Arg	445	Leu	Gln

<210> 22

<211> 447

<212> PRT

<213> Oryctolagus cuniculus

<400> 22

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val
1				5					10					15	
Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	Ser	Ser	Asn	Gly	Arg	Gln	Arg
			20					25					30		
Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Glu	Pro	Ala	Arg
		35					40					45			
Ala	Ala	Gly	Gly	Arg	Gly	Gly	Asp	His	Pro	Ala	Val	Ser	Val	Gly	Ile
	50				55						60				
Arg	Arg	Val	Ser	Asn	Glu	Ser	Ala	Ala	Pro	Leu	Val	Pro	Ala	Ala	Ala
65				70						75					80
Gln	Pro	Glu	Ala	Asp	Asn	Gln	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr
			85						90					95	
Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Ala	Gly	Ser
			100					105					110		
Trp	Ala	Pro	Arg	Glu	Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg	Leu
		115					120					125			
Glu	Tyr	Leu	Arg	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile
	130					135					140				
Glu	Asp	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Pro	Glu	Ile
145					150					155					160
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asp	Phe	Cys	Pro	Ile	Leu	Gln	Val	Phe
				165					170					175	
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser	Asp
			180					185					190		
Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Gln	Lys	Asn	Ala	Ala	Leu	Lys	Leu
		195					200					205			
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu
	210					215					220				
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe
225					230					235					240
Val	Trp	Glu	Arg	Val	Lys	Val	Leu	Gln	Asp	Tyr	Ala	Gly	Leu	Ile	Leu
				245					250					255	
Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe
			260					265					270		
Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Gln	Glu	Cys	Pro	Glu	Cys	Asp	Val
		275					280					285			
Leu	Ser	Leu	Gly	Thr	Tyr	Thr	Ala	Ser	Arg	Ser	Phe	His	Gly	Ile	Ala
	290					295					300				
His	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly
305					310						315				320
Leu	Ala	Leu	Thr	Arg	Asn	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp
				325					330					335	
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr
			340					345					350		
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Leu	Trp	Arg	Val	Leu	Val	Pro	Gln
		355					360					365			
Val	Pro	Arg	Val	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys

colf-seql

370	Thr	Cys	Arg	Pro	Phe	Thr	375	Gln	Ser	Ala	Gln	Ile	380	Glu	Ser	Leu	Leu	Asn
385	Ser	Asn	Arg	Gln	Tyr	Met	390	Phe	Pro	Glu	Thr	395	Leu	Ile	Ile	Ser	Glu	Lys
	Ser	Pro	Val	Val	Ser	Ile	405	Ala	Ser	Pro	Arg	410	Lys	Asn	Gly	Gly	Trp	Gly
	Asp	Ile	Arg	Asp	His	Glu	420	Leu	Cys	425	Lys	Ser	Tyr	Arg	Arg	430	Leu	Gln
			435						440						445			

<210> 23

<211> 446

<212> PRT

<213> Ailuropoda melanoleuca

<400> 23

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val
1	Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	10	Ser	Ser	Asn	Gly	Arg
	Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Glu	Pro	Ala
	Gly	Ala	Gly	Gly	Arg	Gly	Gly	Asp	His	Ser	Ala	Val	Ser	Ala	Gly
	Arg	Arg	Val	Ser	Asn	Asp	Ser	Ala	Ala	Pro	Leu	Val	Pro	Ala	Ala
65	Gln	Pro	Glu	Ala	Asp	Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val
	Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Ala	Gly
	Trp	Ala	Pro	Arg	Glu	Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg
	Asp	Tyr	Leu	Arg	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly
	Asp	Asn	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu
145	Asn	Gln	Leu	Ile	Ala	Gly	Val	Asp	Phe	Cys	Pro	Val	Leu	Gln	Val
	Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser
	Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Glu	Lys	Asn	Ala	Ala	Leu	Lys
	Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg
	Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His
225	Val	Trp	Glu	Arg	Val	Lys	Val	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Ile
	Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val
	Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Glu	Glu	Cys	Thr	Glu	Cys	Asp
	Leu	Ser	Leu	Gly	Thr	Tyr	Thr	Ala	Val	Arg	Ser	Phe	His	Gly	Ile
	Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met
305	Leu	Ala	Leu	Thr	Arg	Asp	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr
	Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln
	Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro
	Val	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys
	Thr	Cys	Arg	Pro	Ser	Thr	375	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu
385	Asn	Asn	Lys	Gln	Tyr	Leu	390	Phe	Pro	Glu	Thr	Leu	Ile	Ile	Ser
															Glu
															Lys

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Phe	Val	Ala	Ala	405 Ile	Ser	Pro	Pro	Arg	410 Lys	Asn	Gly	Gly	Trp	415 Gly	Asp
Ile	Arg	Asp	420 His	Glu	Leu	Cys	Lys	425 Ser	Tyr	Arg	Arg	Leu	430 Gln		
		435					440					445			

<210> 24
 <211> 446
 <212> PRT
 <213> Canis familiaris

<400> 24

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val
1				5					10					15	
Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	Ser	Ser	Asn	Gly	Arg	Gln	Arg
			20					25					30		
Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Glu	Pro	Ala	Arg
		35					40					45			
Gly	Ala	Gly	Gly	Arg	Gly	Gly	Asp	His	Ser	Ala	Val	Ser	Val	Gly	Ile
	50					55					60				
Arg	Arg	Gly	Ser	Asn	Glu	Ser	Ala	Ala	Pro	Leu	Val	Pro	Ala	Ala	Pro
65				70					75					80	
Gln	Pro	Glu	Ala	Asp	Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr
			85					90					95		
Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Ala	Gly	Ser
			100					105					110		
Trp	Ala	Pro	Arg	Glu	Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg	Pro
		115					120					125			
Asp	Tyr	Leu	Arg	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile
	130					135					140				
Asp	Asn	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu	Ile
145					150					155					160
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asp	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe
				165					170					175	
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser	Asp
			180					185					190		
Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Glu	Lys	Asn	Ala	Ala	Leu	Lys	Met
		195					200					205			
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu
	210					215					220				
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe
225					230						235				240
Val	Trp	Glu	Arg	Val	Lys	Val	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Ile	Leu
				245					250					255	
Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe
			260					265					270		
Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Glu	Glu	Cys	Pro	Glu	Cys	Asp	Val
		275					280					285			
Leu	Ser	Leu	Gly	Thr	Tyr	Thr	Ala	Ile	Arg	Ser	Phe	His	Gly	Ile	Ala
	290					295					300				
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly
305					310					315					320
Leu	Ala	Leu	Thr	Arg	Asp	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp
				325					330					335	
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr
			340					345					350		
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln
		355					360					365			
Val	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys
	370					375					380				
Thr	Cys	Lys	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn
385					390					395					400
Ser	Asn	Lys	Gln	Tyr	Leu	Phe	Pro	Glu	Thr	Leu	Ile	Ile	Ser	Glu	Lys
				405					410					415	
Phe	Val	Ala	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly	Asp
			420					425					430		
Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln		

eolf-seql

435

440

445

<210> 25
 <211> 446
 <212> PRT
 <213> Sus scrofa

<400> 25

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Phe	Val
1				5					10					15	
Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	Ser	Ser	Asn	Gly	Arg	Gln	Arg
			20					25				30			
Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Glu	Pro	Val	Arg
		35					40					45			
Gly	Ala	Gly	Ala	Arg	Ala	Gly	Asp	His	Pro	Ala	Ile	Ser	Val	Gly	Ile
	50					55					60				
Arg	Arg	Gly	Ser	Asn	Asp	Ser	Ala	Ala	Pro	Leu	Val	Ala	Ala	Ala	Pro
65					70					75					80
Gln	Pro	Glu	Val	Asp	Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr
				85					90					95	
Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Val	Ser	Ser
			100					105					110		
Trp	Val	Pro	Arg	Glu	Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg	Ala
		115					120					125			
Glu	Tyr	Leu	Lys	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile
	130					135					140				
Asp	Asn	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu	Ile
145					150					155					160
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asp	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe
				165					170					175	
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Thr	Asp
			180					185					190		
Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Glu	Lys	Asn	Ala	Ala	Leu	Lys	Met
		195					200					205			
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu
	210					215					220				
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe
225					230					235					240
Val	Trp	Glu	Arg	Val	Lys	Val	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Ile	Leu
				245					250					255	
Phe	Leu	Glu	Glu	Asp	His	Tyr	Val	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe
			260					265					270		
Lys	Lys	Met	Trp	Asn	Leu	Lys	Gln	Gln	Glu	Cys	Pro	Glu	Cys	Asp	Val
		275					280					285			
Leu	Ser	Leu	Gly	Thr	Tyr	Thr	Thr	Val	Arg	Ser	Phe	Arg	Asp	Val	Ala
	290					295					300				
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly
305					310					315					320
Leu	Ala	Leu	Thr	Arg	Asp	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp
				325					330					335	
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr
			340					345					350		
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln
		355					360					365			
Val	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys
	370					375					380				
Thr	Cys	Arg	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn
385					390					395					400
Ser	Asn	Lys	Gln	Tyr	Met	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys
				405					410					415	
Leu	Thr	Ala	Ala	Leu	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly	Asp
		420						425					430		
Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln		
		435					440					445			

<210> 26

eolf-seql

<211> 446
 <212> PRT
 <213> Bos taurus

<400> 26

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Met	Leu	Val
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Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	Ser	Ser	Asn	Gly	Arg	Gln	Arg
			20					25					30		
Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Asp	Pro	Val	Arg
		35					40					45			
Gly	Ala	Gly	Ala	Arg	Ala	Gly	Asp	His	Pro	Ala	Val	Ser	Val	Gly	Ile
	50					55					60				
Arg	Arg	Gly	Ser	Asn	Glu	Ser	Ala	Ala	Pro	Leu	Val	Ala	Ala	Ala	Pro
65					70					75					80
Gln	Pro	Glu	Val	Asp	Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr
				85					90					95	
Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Ala	Ala	Ser
			100					105					110		
Trp	Thr	Pro	Arg	Glu	Leu	Ala	Leu	Val	Val	Gln	Val	His	Asn	Arg	Pro
		115					120					125			
Glu	Tyr	Leu	Lys	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile
	130					135					140				
Asp	Asp	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu	Ile
145					150					155					160
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asp	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe
				165					170					175	
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Thr	Asp
			180					185					190		
Pro	Arg	Asp	Cys	Pro	Arg	Asp	Met	Glu	Lys	Asn	Ala	Ala	Leu	Arg	Met
		195					200					205			
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu
	210					215					220				
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe
225					230					235					240
Val	Trp	Glu	Arg	Val	Lys	Val	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Ile	Leu
				245					250					255	
Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe
			260					265					270		
Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Leu	Glu	Cys	Pro	Glu	Cys	Asp	Val
		275					280					285			
Leu	Ser	Leu	Gly	Thr	Tyr	Thr	Ala	Ile	Arg	Asn	Phe	Tyr	Asp	Val	Ala
	290					295					300				
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly
305					310					315					320
Leu	Ala	Leu	Thr	Arg	Glu	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp
				325					330					335	
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr
			340					345					350		
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln
		355					360					365			
Val	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Gln	Lys
	370					375					380				
Thr	Cys	Arg	Pro	Ala	Thr	Gln	Ser	Ala	Gln	Leu	Glu	Ser	Leu	Leu	Asn
385					390					395					400
Asn	Asn	Lys	Gln	Tyr	Leu	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys
				405					410					415	
Phe	Met	Thr	Ser	Leu	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly	Asp
			420					425					430		
Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln		
		435					440					445			

<210> 27
 <211> 442
 <212> PRT
 <213> Rattus norvegicus

eolf-seql

<400> 27

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Met Arg Phe Arg Ile Tyr Lys Arg Lys Val Leu Ile Leu Thr Leu Val
 1      5      10      15
Val Ala Ala Cys Gly Phe Val Leu Trp Ser Ser Asn Gly Arg Gln Arg
      20      25      30
Lys Asn Asp Ala Leu Ala Pro Pro Leu Leu Asp Ser Glu Pro Leu Arg
      35      40      45
Gly Ala Gly His Phe Ala Ala Ser Val Gly Ile Arg Arg Val Ser Asn
      50      55      60
Asp Ser Ala Ala Pro Leu Val Pro Ala Val Pro Arg Pro Glu Val Asp
65      70      75      80
Asn Leu Thr Leu Arg Tyr Arg Ser Leu Val Tyr Gln Leu Asn Phe Asp
      85      90      95
Gln Met Leu Arg Asn Val Asp Lys Asp Gly Thr Trp Ser Pro Gly Glu
      100      105      110
Leu Val Leu Val Val Gln Val His Asn Arg Pro Glu Tyr Leu Arg Leu
      115      120      125
Leu Ile Asp Ser Leu Arg Lys Ala Gln Gly Ile Arg Glu Val Leu Val
130      135      140
Ile Phe Ser His Asp Phe Trp Ser Ala Glu Ile Asn Ser Leu Ile Ser
145      150      155      160
Ser Val Asp Phe Cys Pro Val Leu Gln Val Phe Phe Pro Phe Ser Ile
      165      170      175
Gln Leu Tyr Pro Ser Glu Phe Pro Gly Ser Asp Pro Arg Asp Cys Pro
      180      185      190
Arg Asp Leu Lys Lys Asn Ala Ala Leu Lys Leu Gly Cys Ile Asn Ala
195      200      205
Glu Tyr Pro Asp Ser Phe Gly His Tyr Arg Glu Ala Lys Phe Ser Gln
210      215      220
Thr Lys His His Trp Trp Trp Lys Leu His Phe Val Trp Glu Arg Val
225      230      235      240
Lys Val Leu Gln Asp Tyr Thr Gly Leu Ile Leu Phe Leu Glu Glu Asp
      245      250      255
His Tyr Leu Ala Pro Asp Phe Tyr His Val Phe Lys Lys Met Trp Lys
260      265      270
Leu Lys Gln Gln Glu Cys Pro Gly Cys Asp Val Leu Ser Leu Gly Thr
275      280      285
Tyr Thr Thr Ile Arg Ser Phe Tyr Gly Ile Ala Asp Lys Val Asp Val
290      295      300
Lys Thr Trp Lys Ser Thr Glu His Asn Met Gly Leu Ala Leu Thr Arg
305      310      315      320
Asp Ala Tyr Gln Lys Leu Ile Glu Cys Thr Asp Thr Phe Cys Thr Tyr
      325      330      335
Asp Asp Tyr Asn Trp Asp Trp Thr Leu Gln Tyr Leu Thr Leu Ala Cys
340      345      350
Leu Pro Lys Val Trp Lys Val Leu Val Pro Gln Ala Pro Arg Ile Phe
355      360      365
His Ala Gly Asp Cys Gly Met His His Lys Lys Thr Cys Arg Pro Ser
370      375      380
Thr Gln Ser Ala Gln Ile Glu Ser Leu Leu Asn Asn Asn Lys Gln Tyr
385      390      395      400
Leu Phe Pro Glu Thr Leu Val Ile Gly Glu Lys Phe Pro Met Ala Ala
      405      410      415
Ile Ser Pro Pro Arg Lys Asn Gly Gly Trp Gly Asp Ile Arg Asp His
420      425      430
Glu Leu Cys Lys Ser Tyr Arg Arg Leu Gln
435      440

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<210> 28

<211> 442

<212> PRT

<213> Mus musculus

<400> 28

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Met Arg Phe Arg Ile Tyr Lys Arg Lys Val Leu Ile Leu Thr Leu Val
 1      5      10      15
Val Ala Ala Cys Gly Phe Val Leu Trp Ser Ser Asn Gly Arg Gln Arg

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eo1f-seq1

Lys	Ser	Asp	20	Leu	Gly	Pro	Pro	25	Leu	Leu	Asp	Ala	Glu	30	Pro	Val	Arg
		35	Ala				40						45				
Gly	Ala	Gly	His	Leu	Ala	Val	Ser	Val	Gly	Ile	Arg	Arg	Val	Ser	Asn		
	50					55					60						
Glu	Ser	Ala	Ala	Pro	Leu	Val	Pro	Ala	Val	Pro	Arg	Pro	Glu	Val	Asp		
65				70					75						80		
Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr	Gln	Leu	Asn	Phe	Asp		
			85						90					95			
Gln	Met	Leu	Arg	Asn	Val	Gly	Asn	Asp	Gly	Thr	Trp	Ser	Pro	Gly	Glu		
			100					105					110				
Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg	Pro	Glu	Tyr	Leu	Arg	Leu		
	115						120					125					
Leu	Ile	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile	Gln	Glu	Val	Leu	Val		
	130					135					140						
Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Ala	Glu	Ile	Asn	Ser	Leu	Ile	Ser		
145				150					155						160		
Arg	Val	Asp	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe	Phe	Pro	Phe	Ser	Ile		
			165					170						175			
Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser	Asp	Pro	Arg	Asp	Cys	Pro		
			180					185					190				
Arg	Asp	Leu	Lys	Lys	Asn	Ala	Ala	Leu	Lys	Leu	Gly	Cys	Ile	Asn	Ala		
	195					200						205					
Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu	Ala	Lys	Phe	Ser	Gln		
	210					215					220						
Thr	Lys	His	His	Trp	Trp	Lys	Leu	His	Phe	Val	Trp	Glu	Arg	Val			
225				230					235					240			
Lys	Val	Leu	Gln	Asp	Tyr	Thr	Gly	Leu	Ile	Leu	Phe	Leu	Glu	Glu	Asp		
			245					250					255				
His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe	Lys	Lys	Met	Trp	Lys		
			260					265					270				
Leu	Lys	Gln	Glu	Cys	Pro	Gly	Cys	Asp	Val	Leu	Ser	Leu	Gly	Thr			
	275					280					285						
Tyr	Thr	Thr	Ile	Arg	Ser	Phe	Tyr	Gly	Ile	Ala	Asp	Lys	Val	Asp	Val		
	290					295				300							
Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly	Leu	Ala	Leu	Thr	Arg		
305				310					315						320		
Asp	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp	Thr	Phe	Cys	Thr	Tyr		
			325					330						335			
Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr	Leu	Thr	Leu	Ala	Cys		
			340					345					350				
Leu	Pro	Lys	Ile	Trp	Lys	Val	Leu	Val	Pro	Gln	Ala	Pro	Arg	Ile	Phe		
	355					360					365						
His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys	Thr	Cys	Arg	Pro	Ser		
	370					375					380						
Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn	Ser	Asn	Lys	Gln	Tyr		
385				390					395					400			
Leu	Phe	Pro	Glu	Thr	Leu	Val	Ile	Gly	Glu	Lys	Phe	Pro	Met	Ala	Ala		
			405					410					415				
Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly	Asp	Ile	Arg	Asp	His		
			420				425						430				
Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln								
	435						440										

<210> 29

<211> 444

<212> PRT

<213> Monodelphis domestica

<400> 29

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val
1				5				10					15		
Val	Ala	Ala	Cys	Gly	Phe	Val	Phe	Trp	Asn	Ser	Asn	Gly	Arg	Gln	Arg
		20					25					30			
Lys	Asn	Glu	Ala	Phe	Ala	Gly	Ser	Val	Pro	Ala	Pro	Val	Arg	Ala	Val
	35					40					45				
Gly	Pro	Gly	Asp	Leu	Arg	Arg	Phe	Pro	Asn	Gly	Ser	Ala	Ala	Pro	Pro

eolf-seql

50	Pro	Glu	Val	Asp	Asn	Met	55	Thr	Leu	Val	Tyr	Arg	60	Ser	Leu	Val	Tyr	Gln
65	Val	Asn	Phe	Asp	Gln	Thr	70	Leu	Lys	Asn	Ala	Leu	75	Ala	Ala	Ala	Ala	Val
				85	Ala	Gly		Gly	Gly	Gly	90	Gly		Gly	Pro	Ala	Gln	Leu
	Gly	Ala	Gly	100	Gly	Ala		Gly	105	Gly	Gly	Gly		Gly	Pro	Ala	Gln	Leu
	Leu	Glu	Leu	115	Val	Leu	Val	Val	120	Val	His	Asn	Arg	125	Pro	Asp	Tyr	Leu
	Lys	Leu	Leu	130	Leu	Asp	Ser	Leu	135	Arg	Lys	Val	Gln	140	Gly	Ile	Gly	Asn
	Leu	Val	Ile	145	Phe	Ser	His	Asp	150	Phe	Trp	Ser	Ala	155	Glu	Ile	Asn	Gln
	Ile	Ala	Gly	165	Val	Asp	Phe	Cys	170	Pro	Val	Leu	Gln	175	Val	Phe	Phe	Pro
	Ser	Ile	Gln	180	Leu	Tyr	Pro	Asn	185	Glu	Phe	Pro	Gly	190	Asn	Asp	Pro	Lys
	Cys	Pro	Arg	195	Asp	Leu	Gln	Lys	200	Lys	Ala	Ala	Leu	205	Lys	Met	Gly	Cys
	Asn	Ala	Glu	210	Tyr	Pro	Asp	Ser	215	Phe	Gly	His	Tyr	220	Arg	Glu	Ala	Lys
	Ser	Gln	Thr	225	Lys	His	His	Trp	230	Trp	Trp	Lys	Leu	235	His	Phe	Ala	Trp
	Arg	Val	Lys	245	Ile	Leu	Arg	Asn	250	Tyr	Ala	Gly	Leu	255	Met	Val	Phe	Leu
	Glu	Asp	His	260	Tyr	Leu	Ala	Pro	265	Asp	Phe	His	Val	270	Leu	Lys	Lys	Met
	Trp	Lys	Leu	275	Lys	Leu	Gln	Glu	280	Cys	Pro	Asp	Cys	285	Val	Leu	Ser	Leu
	Gly	Ser	Tyr	290	Ala	Val	Ser	Arg	295	Ser	Phe	Phe	Gly	300	Lys	Ala	Asp	Lys
	Glu	Val	Lys	305	Thr	Trp	Lys	Ser	310	Thr	Glu	His	Asn	315	Met	Gly	Leu	Ala
	Thr	Arg	Asp	325	Thr	Tyr	Gln	Lys	330	Leu	Ile	Glu	Cys	335	Thr	Asp	Thr	Phe
	Thr	Tyr	Asp	340	Asp	Tyr	Asn	Trp	345	Trp	Thr	Leu	Gln	350	Tyr	Leu	Thr	Thr
	Thr	Cys	Leu	355	Lys	Asn	Phe	Trp	360	Lys	Val	Met	Val	365	Pro	Glu	Val	Pro
	Ile	Tyr	His	370	Ala	Gly	Asp	Cys	375	Gly	Met	His	His	380	Lys	Asp	Pro	Cys
	Pro	Ser	Thr	385	Gln	Ser	Ala	Gln	390	Ile	Glu	Leu	Leu	395	Leu	Asn	Lys	Asn
	Gln	Tyr	Leu	405	Phe	Pro	Lys	Thr	410	Leu	Ser	Ile	Ser	415	Lys	Lys	Tyr	Ser
	Val	Pro	Leu	420	Leu	Pro	His	Gly	425	Lys	Asn	Gly	Gly	430	Trp	Gly	Asp	Ile
	Asp	His	Glu	435	Leu	Cys	Lys	Ser	440	Tyr	Arg	Arg	Leu		Gln			

<210> 30

<211> 432

<212> PRT

<213> Xenopus laevis

<400> 30

Met	Arg	Cys	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Ile	Ile	Leu	Thr	Leu	Val
1	Val	Val	Ala	5	Gly	Leu	Ala	Leu	10	Ser	Ser	Gly	Arg	Gln	Lys
	Val	Val	Ala	20	Gly	Leu	Ala	Leu	25	Ser	Ser	Gly	Arg	Gln	Lys
	Asn	Gly	Phe	35	Val	Pro	Glu	Val	40	Ser	Asp	Arg	Phe	Gln	Lys
	His	Ile	Ser	50	Pro	Ala	Ala	Arg	55	Lys	Val	Ser	Asn	Glu	Ser
	Lys	Glu	Gln	65	Lys	Thr	Arg	Val	70	Asp	Asn	Met	Thr	Leu	Val
	Val	Val	Phe	80	Gln	Trp	Asn	Phe	85	Asp	Gln	Ala	Ile	Arg	Asn

self-seql

Ile	Asn	Arg	Pro	85	Gln	Asp	Asp	Val	Val	Val	Val	Gln	Val	95	His	Asn
Arg	Pro	Glu	Phe	100	Leu	Arg	Arg	Leu	105	Leu	Asp	Ser	Leu	110	Lys	Ala
Gly	Ile	Glu	Asn	115	Val	Leu	Leu	120	Phe	Ser	His	Asp	Tyr	125	Trp	Ser
Glu	130	Ile	Asn	Gln	Ile	135	Ala	Ser	Val	Asp	Phe	Cys	Gln	Val	Leu	Gln
145	Ile	Phe	Phe	Pro	Phe	150	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro
Ile	165	Asp	Pro	Lys	180	Asp	Cys	Pro	Arg	Asp	170	Ile	Lys	Lys	Lys	Asp
His	185	Leu	Gly	Cys	Ile	Asn	Ala	Glu	200	Tyr	Pro	Asp	Ser	Phe	205	Gly
Glu	195	Leu	Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu
Arg	210	Glu	Val	Trp	Asp	Lys	230	Leu	Lys	Val	Leu	Lys	Glu	His	Asn	Gly
Gln	225	Phe	Val	Trp	Asp	Lys	230	Leu	Lys	Val	Leu	Lys	Glu	His	Asn	Gly
Val	245	Leu	Phe	Ile	Glu	245	Glu	Asp	His	Tyr	Leu	Ser	Pro	Asp	Phe	Tyr
Thr	250	Leu	Lys	Lys	Met	Trp	Ser	Lys	Lys	Asn	Glu	Glu	Cys	Pro	Asp	Cys
Asp	260	Met	Leu	Cys	Leu	Gly	Thr	Tyr	280	Ala	His	Thr	Pro	Phe	285	Ala
Ala	275	Gly	Lys	Val	Glu	Val	Lys	295	Thr	Trp	Lys	Ser	Thr	300	Glu	His
Gly	290	Met	Ala	Met	Asn	Arg	Glu	Thr	Tyr	Lys	Lys	Leu	Val	Ala	Cys	Ser
305	Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	320
Glu	310	Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln
Tyr	325	Leu	Thr	Val	Asn	Cys	Leu	Pro	Lys	330	Phe	Trp	Lys	Val	Met	335
340	Val	Pro	Arg	Ile	Tyr	His	Ile	Gly	Asp	Cys	Gly	Met	His	His	Asn	350
Glu	355	Val	Pro	Arg	Ile	Tyr	His	Ile	Gly	Asp	Cys	Gly	Met	His	His	Asn
Lys	370	Pro	Cys	Arg	Pro	Thr	Thr	Glu	Ser	Ala	Lys	Leu	Glu	Ala	Leu	Phe
Thr	385	Ser	Asn	Gln	Arg	Asp	390	Leu	Phe	Pro	Glu	Lys	Ile	Asp	Ile	Ser
Arg	400	Tyr	Thr	Met	Ala	Ala	Leu	Ser	Pro	His	Val	Lys	Asn	Gly	Gly	Trp
Gly	410	Asp	Ile	Arg	Asp	His	Glu	Leu	Cys	425	Lys	Ser	Tyr	His	Arg	Gln
420	Asp	Ile	Arg	Asp	His	Glu	Leu	Cys	425	Lys	Ser	Tyr	His	Arg	430	Gln

<210> 31

<211> 450

<212> PRT

<213> Danio rerio

<400> 31

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Val	Ile	Leu	Thr	Leu	Val
1	Val	Ile	Ile	Cys	Gly	Phe	Ala	Val	Trp	Asn	Ser	Gly	Lys	Pro	Lys
5	Val	Ile	Ile	Cys	Gly	Phe	Ala	Val	Trp	Asn	Ser	Gly	Lys	Pro	Lys
20	Ala	Ser	Thr	Val	Phe	Pro	Lys	Glu	Val	Glu	Thr	Val	Lys	Arg	Ser
35	Val	Gly	Ser	Gln	Ile	Gln	Ala	Thr	Ile	Pro	Val	Thr	Arg	Lys	Pro
50	Asn	Glu	Ser	Ile	Pro	Glu	Lys	Gln	Gln	Gln	Gln	Pro	Val	Ala	Lys
65	Ser	Glu	Ala	Asp	Asn	Thr	Thr	Leu	Val	Tyr	Arg	Gly	Ile	Val	Phe
80	Leu	Asn	Phe	Asp	Gln	Asn	Leu	Lys	Asn	Glu	Glu	Lys	Phe	Arg	Ala
95	Arg	Gln	Lys	Asp	Asp	Leu	Val	Ile	Val	Val	Gln	Val	His	Asn	Arg
110	Glu	Tyr	Leu	Arg	Leu	Leu	Val	Asp	Ser	Leu	Arg	Lys	Ser	Lys	Gly
125	Glu	Tyr	Leu	Arg	Leu	Leu	Val	Asp	Ser	Leu	Arg	Lys	Ser	Lys	Gly

eolf-seql

130	Glu	Asn	Ile	Leu	Leu	Ile	135	Phe	Ser	His	Asp	Phe	140	Trp	Ser	Pro	Glu	Ile		
145	Asn	Gln	Ile	Val	Ala	Ser	150	Val	Asp	Phe	Cys	Leu	155	Val	Leu	Gln	Ile	160	Phe	
	Phe	Pro	Phe	Ser	165	Ile	Gln	Leu	Tyr	Pro	170	Gln	Glu	Phe	Pro	Gly	Asn	175	Asp	
	Pro	Arg	Asp	180	Cys	Pro	Arg	Asp	Ile	185	Pro	Lys	Lys	Glu	Ala	Leu	Thr	190	Leu	
	Gly	Cys	Ile	Asn	195	Ala	Glu	Tyr	Pro	200	Asp	Ser	Phe	Gly	His	Tyr	Arg	205	Glu	
	Ala	Lys	Phe	Ser	210	Gln	Thr	215	Lys	His	His	Trp	Trp	220	Trp	Lys	Leu	His	225	Phe
	Val	Trp	Asp	Arg	230	Val	Arg	Val	Leu	Lys	Asp	His	Lys	235	Gly	Leu	Val	240	Leu	
	Leu	Ile	Glu	Glu	245	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	250	Tyr	His	Leu	255	Leu	
	Lys	Leu	Met	Ala	260	Ser	Leu	Lys	Lys	265	Glu	Gln	Cys	Pro	Asp	Cys	Asp	270	Ile	
	Leu	Ser	Leu	Gly	275	Ser	Tyr	Gly	His	280	Ile	Gly	Tyr	Ser	285	Lys	Ala	290	Asn	
	Lys	Val	Glu	Val	295	Lys	Ala	Trp	Lys	300	Ser	Thr	Glu	His	305	Asn	Met	Gly	310	Met
	Ala	Leu	Asn	Arg	315	Asp	Ala	Tyr	Gln	320	Lys	Leu	Leu	Arg	325	Cys	Thr	Asp	330	Ala
	Phe	Cys	Thr	Tyr	335	Asp	Asp	Tyr	Asn	340	Trp	Asp	Trp	Ser	345	Leu	Gln	His	350	Leu
	Thr	Val	Thr	Cys	355	Leu	Pro	Ala	Phe	360	Leu	Lys	Val	Met	365	Val	Ser	Glu	370	Ala
	Pro	Arg	Ile	Phe	375	His	Ala	Gly	Asp	380	Cys	Gly	Met	His	385	His	Lys	Lys	390	Ser
	Ala	Cys	Met	Pro	395	Ser	Gly	Gln	Lys	400	Thr	Lys	Ile	Glu	405	Asn	Val	Leu	410	Gln
	Asn	Ser	Gly	Asn	415	Gln	Leu	Phe	Pro	420	Lys	Gln	Leu	Leu	425	Ile	Thr	Lys	430	Arg
	Leu	Pro	Ala	Ser	435	Gly	Ala	Lys	Gly	440	Val	Ala	Pro	His	445	Val	Lys	Asn	450	Gly
	Gly	Trp	Gly	Asp	455	Ile	Arg	Asp	His	460	Glu	Leu	Cys	Lys	465	Ser	Tyr	Leu	470	Arg
	Leu	Gln																		

<210> 32

<211> 465

<212> PRT

<213> Salmo salar

<400> 32

1	Met	Arg	Phe	Arg	Val	Tyr	Lys	Arg	Lys	Val	Val	Ile	Leu	Thr	Leu	Val
5	Val	Val	Val	Cys	Gly	Leu	Ala	Phe	Trp	Thr	Ser	Gly	Lys	Gln	Lys	Lys
10	Ser	Ser	Gly	Val	Val	Val	Leu	Lys	Glu	Ala	Glu	Gly	Ala	Arg	Arg	Ser
15	Ser	Ser	Ser	Gln	Val	Gln	Pro	Gln	Pro	Gln	Ala	Thr	Pro	Glu	Val	Ser
20	Arg	Ile	Pro	Asn	Val	Pro	Pro	Ile	Ala	Pro	Val	Asn	Glu	Thr	His	Pro
25	Lys	Asn	Gln	Pro	Glu	Lys	His	Leu	Glu	Lys	Glu	Glu	Val	Val	Lys	Pro
30	Glu	Val	Asp	Asn	Thr	Thr	Gln	Val	Tyr	Arg	Gly	Ile	Val	Phe	Gln	Leu
35	Asn	Phe	Asp	Gln	Thr	Val	Arg	His	Glu	Glu	Lys	Phe	Arg	Ala	Ala	Arg
40	Lys	Lys	Asp	Asp	Leu	Val	Val	Val	Gln	Val	His	Asn	Arg	Pro	Asp	
45	Tyr	Leu	Arg	Leu	Leu	Val	Glu	Ser	Leu	Arg	Lys	Ala	Arg	Gly	Val	Glu

eolf-seql

145	Ser	Ile	Leu	Leu	Ile	150	Phe	Ser	His	Asp	Phe	155	Trp	Ser	Pro	Glu	Ile	160	Asn
	Gln	Val	Val	Ala	165	Ser	Val	Asp	Phe	Cys	170	Gln	Val	Leu	Gln	Ile	175	Phe	Phe
	Pro	Phe	Ser	180	Ile	Gln	Leu	Tyr	Pro	185	Gln	Glu	Phe	Pro	Gly	190	His	Asp	Pro
	Arg	Asp	Cys	195	Pro	Arg	Asp	Ile	200	Ser	Lys	Ile	Asp	Ala	205	Leu	Lys	Leu	Gly
	Cys	Ile	Asn	Ala	Glu	Tyr	215	Pro	Asp	Ser	Phe	Gly	220	His	Tyr	Arg	Glu	Ala	
225	Lys	Phe	Ser	Gln	Thr	230	Lys	His	His	Trp	235	Trp	Trp	Lys	Leu	His	Phe	Val	
	Trp	Asp	Arg	Val	245	Arg	Ala	Leu	Lys	Asp	250	His	Arg	Gly	Leu	Val	255	Leu	Leu
	Ile	Glu	Glu	Asp	His	Phe	Leu	Ser	265	Pro	Asp	Phe	Leu	His	Phe	Leu	Lys		
	Leu	Met	Ser	Ile	Leu	Lys	Arg	Glu	280	Asn	Cys	Pro	Asp	Cys	Asp	Ile	Leu		
	Ser	Leu	Gly	Ser	Tyr	Gly	295	His	Ile	Ser	Tyr	Pro	300	Lys	Ala	Asn	Lys		
305	Val	Glu	Val	Lys	Ala	Trp	Lys	Ser	Thr	Glu	315	His	Asn	Met	Gly	Met	Ala		
	Leu	Ser	Arg	Glu	Thr	Tyr	Gln	Lys	Leu	Ile	Gln	Cys	Thr	Asp	Ala	Phe			
	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	345	Asp	Trp	Ser	Leu	Gln	His	Leu	Thr		
	Val	Thr	Cys	Leu	Pro	Ser	Tyr	Trp	360	Lys	Val	Met	Val	Ser	Glu	Ala	Pro		
	Arg	Val	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys	Ser	Val			
385	Cys	Met	Pro	Ser	Ser	Gln	Lys	Ser	Lys	Ile	395	Asp	Thr	Ile	Leu	Gln	Ser		
	Ser	Ser	Asn	Gln	Leu	Phe	Pro	Lys	Asn	Leu	Leu	Ile	Thr	Lys	Arg	Leu			
	Pro	Ala	Asn	Gly	Ala	Gly	Gly	Val	425	Ala	Pro	His	Val	Lys	Asn	Gly	Gly		
	Trp	Gly	Asp	Ile	Arg	Asp	His	Glu	440	Leu	Cys	Lys	Ser	Tyr	Pro	Arg	Leu		
450	Gln						455						460						

<210> 33
 <211> 471
 <212> PRT
 <213> Drosophila melanogaster

<400> 33

Met	Gly	Arg	Lys	Arg	Asn	Asn	Phe	Tyr	Met	Arg	Ser	Leu	Phe	Leu	Leu				
1	Ala	Leu	Gly	Ile	5	Phe	Gly	Leu	Leu	Gln	Tyr	Asn	Asn	Phe	Asn	Tyr	Leu		
	Asp	Ser	Arg	Asp	Asn	Val	Leu	Gly	25	Asp	Ala	Val	Thr	Asn	Asp	Ser	Asp		
	Asp	Ala	Ile	Leu	Ala	Met	Val	Pro	40	Ala	Thr	Leu	His	Lys	Tyr	Leu	Thr		
	Pro	His	Ser	Arg	Asn	His	Ser	Ala	55	Ser	Gly	Ala	Gly	Ala	Leu	Asn	Gly		
65	Ala	Ala	Leu	Leu	Leu	Asn	Ala	Ser	70	Ser	Pro	Gly	Ala	Ala	Thr	Ala	Ser		
	Thr	Ile	Ser	Phe	Asp	Val	Tyr	His	85	Pro	Pro	Asn	Ile	Thr	Glu	Ile	Lys		
	Arg	Gln	Ile	Val	Arg	Tyr	Asn	Asp	100	Met	Gln	Met	Val	Leu	Asn	Glu	Asp		
	Val	Phe	Gly	Pro	Leu	Gln	Asn	Asp	115	Ser	Val	Ile	Ile	Val	Val	Gln	Val		
	His	Thr	Arg	Ile	Thr	Tyr	Leu	Arg	130	His	Leu	Ile	Val	Ser	Leu	Ala	Gln		

eolf-seql

145	Ala	Arg	Asp	Ile	Ser	150	Lys	Val	Leu	Leu	Val	155	Phe	Ser	His	Asp	Tyr	160	Tyr
	Asp	Asp	Asp	Ile	Asn	165	Asp	Leu	Val	Gln	Gln	170	Ile	Asp	Phe	Cys	Lys	175	Val
	Met	Gln	Ile	Phe	Tyr	180	Pro	Tyr	Ser	185	Ile	Gln	Thr	His	Pro	Asn	Glu	190	Tyr
	Pro	Gly	Val	Asp	Pro	195	Asn	Asp	Cys	200	Pro	Arg	Asn	Ile	205	Lys	Lys	210	Gln
	Ala	Leu	Ile	Thr	Asn	215	Cys	Asn	Asn	220	Ala	Met	Tyr	Pro	Asp	Leu	Tyr	225	Gly
	His	Tyr	Arg	Glu	Ala	230	Lys	Phe	Thr	235	Gln	Thr	Lys	His	His	Trp	Ile	240	Trp
	Lys	Ala	Asn	Arg	Val	245	Phe	Asn	Glu	250	Leu	Glu	Val	Thr	Arg	Tyr	His	255	Thr
	Gly	Leu	Val	Leu	Phe	260	Leu	Glu	Glu	265	Asp	His	Tyr	Val	Ala	Glu	Asp	270	Phe
	Leu	Tyr	Leu	Leu	Ala	275	Met	Met	Gln	280	Gln	Arg	Thr	Lys	Asp	Leu	Cys	285	Pro
	Gln	Cys	Asn	Val	Leu	290	Ser	Leu	Gly	295	Thr	Tyr	Leu	Lys	Thr	Phe	Asn	300	Tyr
	Tyr	Thr	Tyr	His	Ser	305	Lys	Val	Glu	310	Val	Met	Pro	Trp	Val	Ser	Ser	315	Lys
	His	Asn	Met	Gly	Phe	320	Ala	Phe	Asn	325	Arg	Thr	Thr	Trp	Ser	Asn	Ile	330	Arg
	Lys	Cys	Ala	Arg	His	335	Phe	Cys	Thr	340	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	345	Trp
	Ser	Leu	Gln	His	Val	350	Ser	Gln	Gln	355	Cys	Leu	Arg	Arg	Lys	Leu	His	360	Ala
	Met	Ile	Val	Lys	Gly	365	Pro	Arg	Val	370	Phe	His	Ile	Gly	Glu	Cys	Gly	375	Val
	His	His	Lys	Asn	Lys	380	Asn	Cys	Glu	385	Ser	Asn	Gln	Val	Ile	Ser	Lys	390	Val
	Gln	His	Val	Leu	Arg	395	Ile	Ala	Arg	400	Asn	Ser	His	Gln	Leu	Phe	Pro	405	Arg
	Ser	Leu	Thr	Leu	Thr	410	Val	Pro	Ser	415	Leu	Met	Lys	Lys	Ser	Lys	Leu	420	Arg
	Lys	Gly	Asn	Gly	Gly	425	Trp	Gly	Asp	430	Met	Arg	Asp	His	Glu	Leu	Cys	435	Leu
	Asn	Met	Thr	Leu	Ala	440	Thr	Arg		445								450	
	465					470													

<210> 34
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 34
 Thr Arg Pro Ala Pro Gly Arg Pro Pro Ser Val Ser Ala Leu Asp Gly
 1 5 10 15
 Asp Pro Ala Ser Leu Thr Arg Glu Val Ile Arg Leu Ala Gln Asp Ala
 20 25 30
 Glu Val Glu Leu Glu Arg Gln Arg Gly Leu Leu Gln Gln Ile Gly Asp
 35 40 45
 Ala Leu Ser Ser Gln Arg
 50

<210> 35
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized Construct

<400> 35

eolf-seql
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1 5 10 15

<210> 36
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized Construct

<400> 36
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1 5 10

<210> 37
 <211> 21
 <212> PRT
 <213> Trichoderma reesei

<400> 37
 Ser Ser Ala Ala Thr Ala Thr Ala Ser Ala Thr Val Pro Gly Gly Gly
 1 5 10 15
 Ser Gly Pro Thr Ser
 20

<210> 38
 <211> 19
 <212> PRT
 <213> Trichoderma reesei

<400> 38
 Ser Thr Gly Asn Pro Ser Gly Gly Asn Pro Pro Gly Gly Asn Pro Pro
 1 5 10 15
 Gly Ser Thr

<210> 39
 <211> 10
 <212> PRT
 <213> Trichoderma reesei

<400> 39
 Met Ala Ser Thr Asn Ala Arg Tyr Val Arg
 1 5 10

<210> 40
 <211> 17
 <212> PRT
 <213> Trichoderma reesei

<400> 40
 Tyr Leu Leu Ile Ala Phe Phe Thr Ile Leu Val Phe Tyr Phe Val Ser
 1 5 10 15
 Asn

<210> 41
 <211> 379
 <212> PRT
 <213> Trichoderma reesei

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<400> 41

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Ser Lys Tyr Glu Gly Val Asp Leu Asn Lys Gly Thr Phe Thr Ala Pro
 1      5      10      15
Asp Ser Thr Lys Thr Thr Pro Lys Pro Pro Ala Thr Gly Asp Ala Lys
 20      25      30
Asp Phe Pro Leu Ala Leu Thr Pro Asn Asp Pro Gly Phe Asn Asp Leu
 35      40      45
Val Gly Ile Ala Pro Gly Pro Arg Met Asn Ala Thr Phe Val Thr Leu
 50      55      60
Ala Arg Asn Ser Asp Val Trp Asp Ile Ala Arg Ser Ile Arg Gln Val
 65      70      75      80
Glu Asp Arg Phe Asn Arg Arg Tyr Asn Tyr Asp Trp Val Phe Leu Asn
 85      90      95
Asp Lys Pro Phe Asp Asn Thr Phe Lys Val Thr Thr Ser Leu Val
100      105      110
Ser Gly Lys Thr His Tyr Gly Glu Ile Ala Pro Glu His Trp Ser Phe
115      120      125
Pro Asp Trp Ile Asp Gln Asp Lys Ala Lys Lys Val Arg Glu Asp Met
130      135      140
Ala Glu Arg Lys Ile Ile Tyr Gly Asp Ser Val Ser Tyr Arg His Met
145      150      155      160
Cys Arg Phe Glu Ser Gly Phe Phe Phe Arg Gln Pro Leu Met Met Asn
165      170      175
Tyr Glu Tyr Tyr Trp Arg Val Glu Pro Ser Ile Glu Leu Tyr Cys Asp
180      185      190
Ile His Tyr Asp Pro Phe Arg Leu Met Val Glu Gln Gly Lys Lys Tyr
195      200      205
Ser Phe Val Ile Ser Leu Tyr Glu Tyr Pro Ala Thr Ile Ala Thr Leu
210      215      220
Trp Glu Ser Thr Lys Lys Phe Met Lys Asn His Pro Glu His Ile Ala
225      230      235      240
Pro Asp Asn Ser Met Arg Phe Leu Ser Asp Asp Gly Gly Glu Thr Tyr
245      250      255
Asn Asn Cys His Phe Trp Ser Asn Phe Glu Ile Gly Ser Leu Glu Trp
260      265      270
Leu Arg Ser Lys Gln Tyr Ile Asp Phe Phe Glu Ser Leu Asp Lys Asp
275      280      285
Gly Gly Phe Phe Tyr Glu Arg Trp Gly Asp Ala Pro Val His Ser Ile
290      295      300
Ala Ala Gly Leu Met Leu Asn Arg Ser Glu Ile His Phe Phe Asn Asp
305      310      315      320
Ile Ala Tyr Trp His Val Pro Phe Thr His Cys Pro Thr Gly Glu Lys
325      330      335
Thr Arg Leu Asp Leu Lys Cys His Cys Asp Pro Lys Glu Asn Phe Asp
340      345      350
Trp Lys Gly Tyr Ser Cys Thr Ser Arg Phe Phe Glu Met Asn Gly Met
355      360      365
Asp Lys Pro Glu Gly Trp Glu Asn Gln Gln Asp
370      375

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<210> 42

<211> 8

<212> PRT

<213> Trichoderma reesei

<400> 42

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Met Ala Ile Ala Arg Pro Val Arg
 1      5

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<210> 43

<211> 15

<212> PRT

<213> Trichoderma reesei

<400> 43

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Ala Leu Gly Gly Leu Ala Ala Ile Leu Trp Cys Phe Phe Leu Tyr

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1

5

10

15

<210> 44
 <211> 371
 <212> PRT
 <213> Trichoderma reesei

<400> 44
 Gln Leu Leu Arg Pro Ser Ser Ser Tyr Asn Ser Pro Gly Asp Arg Tyr
 1 5 10 15
 Ile Asn Phe Glu Arg Asp Pro Asn Leu Asp Pro Thr Gly Glu Pro Glu
 20 25 30
 Gly Ile Leu Val Arg Thr Ser Asp Arg Tyr Ala Pro Asp Ala Lys Asp
 35 40 45
 Thr Asp Arg Ala Ser Ala Thr Leu Leu Ala Leu Val Arg Asn Glu Glu
 50 55 60
 Val Asp Asp Met Val Ala Ser Met Val Asp Leu Glu Arg Thr Trp Asn
 65 70 75 80
 Ser Lys Phe Asn Tyr Pro Trp Thr Phe Phe Asn Asp Lys Pro Phe Ser
 85 90 95
 Glu Glu Phe Lys Lys Lys Thr Ser Ala Val Thr Asn Ala Thr Cys Asn
 100 105 110
 Tyr Glu Leu Ile Pro Lys Glu His Trp Asp Ala Pro Ser Trp Ile Asp
 115 120 125
 Pro Ala Ile Phe Glu Glu Ser Ala Ala Val Leu Lys Lys Asn Gly Val
 130 135 140
 Gln Tyr Ala Asn Met Met Ser Tyr His Gln Met Cys Arg Trp Asn Ser
 145 150 155 160
 Gly Met Phe Tyr Lys His Pro Ala Leu Lys Asp Val Arg Tyr Tyr Trp
 165 170 175
 Arg Val Glu Pro Lys Val His Phe Phe Cys Asp Val Asp Tyr Asp Val
 180 185 190
 Phe Arg Tyr Met Gln Asp Asn Asn Lys Thr Tyr Gly Phe Thr Ile Asn
 195 200 205
 Leu Tyr Asp Asp Pro His Thr Leu Pro Thr Leu Trp Pro Gln Thr Ala
 210 215 220
 Lys Phe Leu Ala Asp His Pro Asn Tyr Leu His Glu His Ser Ala Ile
 225 230 235 240
 Lys Trp Val Ile Asp Asp Ala Arg Arg Pro Gln His Asn Arg Glu Ala
 245 250 255
 Gln Gly Phe Ser Thr Cys His Phe Trp Ser Asn Phe Glu Val Ala Asp
 260 265 270
 Met Glu Phe Trp Arg Ser Lys Val Tyr Glu Asp Tyr Phe Glu His Leu
 275 280 285
 Asp Arg Ala Gly Gly Phe Phe Tyr Glu Arg Trp Gly Asp Ala Pro Val
 290 295 300
 His Ser Ile Ala Leu Gly Leu Phe Glu Asp Ser Ser Lys Ile His Trp
 305 310 315 320
 Phe Arg Asp Ile Gly Tyr Gln His Ile Pro Phe Phe Asn Cys Pro Asn
 325 330 335
 Ser Pro Lys Cys Lys Gly Cys Val Thr Gly Arg Leu Thr Asp Gly Glu
 340 345 350
 Pro Phe Leu His Arg Glu Asp Cys Arg Pro Asn Trp Phe Lys Tyr Ala
 355 360 365
 Gly Met Gly
 370

<210> 45
 <211> 6
 <212> PRT
 <213> Trichoderma reesei

<400> 45
 Met Leu Asn Pro Arg Arg
 1 5

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<210> 46
 <211> 15
 <212> PRT
 <213> Trichoderma reesei

<400> 46
 Ala Leu Ile Ala Ala Ala Phe Ile Leu Thr Val Phe Phe Leu Ile
 1 5 10 15

<210> 47
 <211> 352
 <212> PRT
 <213> Trichoderma reesei

<400> 47
 Ser Arg Ser His Asn Ser Glu Ser Ala Ser Thr Ser Glu Pro Lys Asp
 1 5 10 15
 Ala Glu Ala Glu Ala Leu Ser Ala Ala Asn Ala Gln Gln Arg Ala Ala
 20 25 30
 Pro Pro Pro Pro Pro Gln Lys Pro Met Ile Asp Met Ser Gly Met Ser
 35 40 45
 Thr Tyr Asp Lys Leu Ala Tyr Ala Tyr Glu Tyr Asp Ile Glu Ser Lys
 50 55 60
 Phe Pro Ala Tyr Ile Trp Gln Thr Trp Arg Lys Thr Pro Ser Glu Gly
 65 70 75 80
 Asp Phe Glu Phe Arg Glu Gln Glu Ala Ser Trp Ser Ile Glu His Pro
 85 90 95
 Gly Phe Ile His Glu Val Ile Thr Asp Ser Val Ala Asp Thr Leu Leu
 100 105 110
 Gln Leu Leu Tyr Gly Ser Ile Pro Glu Val Leu Glu Ala Tyr His Ala
 115 120 125
 Leu Pro Leu Pro Val Leu Lys Ala Asp Leu Phe Arg Tyr Leu Ile Leu
 130 135 140
 Tyr Ala Arg Gly Gly Ile Tyr Ser Asp Ile Asp Thr Tyr Ala Ile Arg
 145 150 155 160
 Ser Ala Leu Glu Trp Ile Pro Pro Gln Ile Pro Lys Glu Thr Val Gly
 165 170 175
 Leu Val Ile Gly Ile Glu Ala Asp Pro Asp Arg Pro Asp Trp Ala Asp
 180 185 190
 Trp Tyr Ser Arg Arg Ile Gln Phe Cys Gln Trp Thr Ile Gln Ser Lys
 195 200 205
 Pro Gly His Pro Val Leu Arg Asp Ile Ile Ser Arg Ile Thr Asn Gln
 210 215 220
 Thr Leu Glu Met Lys Lys Ser Gly Lys Leu Ser Ala Phe Gln Gly Asn
 225 230 235 240
 Arg Val Val Asp Leu Thr Gly Pro Ala Val Trp Thr Asp Thr Ile Met
 245 250 255
 Asp Tyr Phe Asn Asp Glu Arg Tyr Phe Asp Met Glu Asn Ser Lys Gly
 260 265 270
 Arg Ile Asp Tyr Arg Asn Phe Thr Gly Met Glu Thr Ser Lys Arg Val
 275 280 285
 Gly Asp Val Val Val Leu Pro Ile Thr Ser Phe Ser Pro Gly Val Gly
 290 295 300
 Gln Met Gly Ala Lys Asp Tyr Asp Asp Pro Met Ala Phe Val Lys His
 305 310 315 320
 Asp Phe Glu Gly Thr Trp Lys Pro Glu Ser Glu Arg His Ile Gly Glu
 325 330 335
 Ile Val Gln Glu Leu Gly Glu Gly Gln Gly Glu Ala Pro Lys Glu Gln
 340 345 350

<210> 48
 <211> 22
 <212> PRT
 <213> Trichoderma reesei

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<400> 48

Met Gly Met Gly Gln Cys Gln Trp Ser Pro Phe Arg Asn Lys Val Pro
 1 5 10 15
 Thr Gln Met Arg Arg Cys
 20

<210> 49

<211> 15

<212> PRT

<213> Trichoderma reesei

<400> 49

Leu Pro Leu Tyr Ile Thr Val Val Cys Val Phe Leu Val Ile Val
 1 5 10 15

<210> 50

<211> 362

<212> PRT

<213> Trichoderma reesei

<400> 50

Asn Phe Asp Trp Ile Leu Ala Ile Pro Asn Pro Ala Ser Val Leu Arg
 1 5 10 15
 Arg Glu Pro Lys Ala Pro Pro Leu Pro Gly Ser Thr Phe Pro Gln Lys
 20 25 30
 Ile Trp Gln Thr Trp Lys Val Asp Pro Leu Asn Phe Asp Glu Arg Asp
 35 40 45
 Leu Val Thr Ala Arg Thr Trp Thr Thr Ile Asn Pro Gly Met Arg Tyr
 50 55 60
 Glu Val Val Thr Asp Ala Asn Glu Met Ala Tyr Ile Glu Asp Arg Tyr
 65 70 75 80
 Gly Pro Asn Gly Phe Asp Arg Pro Asp Ile Val Glu Phe Tyr Lys Met
 85 90 95
 Ile Asn Leu Pro Ile Ile Lys Ala Asp Leu Leu Arg Tyr Met Ile Met
 100 105 110
 Tyr Ala Glu Gly Gly Ile Tyr Ala Asp Ile Asp Val Glu Thr Met Lys
 115 120 125
 Pro Phe His Arg Phe Ile Pro Asp Arg Tyr Asp Glu Lys Asp Ile Asp
 130 135 140
 Ile Ile Ile Gly Val Glu Ile Asp Gln Pro Asp Phe Lys Asp His Pro
 145 150 155 160
 Ile Leu Gly Lys Lys Ser Met Ser Phe Cys Gln Trp Thr Phe Val Ala
 165 170 175
 Arg Pro Gln Gln Pro Val Met Met Arg Leu Ile Glu Asn Ile Met Lys
 180 185 190
 Trp Phe Lys Thr Val Ala Arg Asp Gln Gly Val Pro Leu Gly Glu Val
 195 200 205
 Gln Leu Asp Phe Asp Gln Val Ile Ser Gly Thr Gly Pro Ser Ala Phe
 210 215 220
 Thr Lys Ala Met Leu Glu Glu Met Asn Arg Lys Thr Lys Gly Pro Lys
 225 230 235 240
 Val Thr Trp Asp Ala Phe His Asn Leu Asp Glu Ser Lys Leu Val Gly
 245 250 255
 Gly Val Leu Val Leu Thr Val Glu Ala Phe Cys Ala Gly Gln Gly His
 260 265 270
 Ser Asp Ser Gly Asn His Asn Ala Arg Asn Ala Leu Val Lys His His
 275 280 285
 Phe His Ala Ser Asn Trp Pro Ser Arg His Pro Arg Tyr Lys His Pro
 290 295 300
 Ala Tyr Gly Gln Val Glu Asp Cys Asn Trp Val Pro Glu Cys Val Arg
 305 310 315 320
 Lys Trp Asp Glu Asp Thr Ser Asn Trp Asp Lys Tyr Ser Glu Asn Glu
 325 330 335
 Gln Lys Lys Ile Leu Gln Asp Ile Glu Asn Ala Arg Leu Glu Arg Glu
 340 345 350
 Arg Gln Gln Gln Ala Leu Ala Ala Leu Pro

355

360

<210> 51
 <211> 17
 <212> PRT
 <213> Trichoderma reesei

<400> 51
 Met Ala Arg Pro Met Gly Ser Val Arg Leu Lys Lys Ala Asn Pro Ser
 1 5 10 15
 Thr

<210> 52
 <211> 16
 <212> PRT
 <213> Trichoderma reesei

<400> 52
 Leu Ile Leu Gly Ala Val Leu Cys Ile Phe Ile Ile Ile Phe Leu Val
 1 5 10 15

<210> 53
 <211> 339
 <212> PRT
 <213> Trichoderma reesei

<400> 53
 Ser Pro Ser Ser Pro Ala Ser Ala Ser Arg Leu Ser Ile Val Ser Ala
 1 5 10 15
 Gln His His Leu Ser Pro Pro Thr Ser Pro Tyr Gln Ser Pro Arg Ser
 20 25 30
 Gly Ala Val Gln Gly Pro Pro Val Thr Arg Tyr Asn Leu Asn Lys
 35 40 45
 Val Thr Val Thr Ser Asp Pro Val Arg Asn Gln Glu His Ile Leu Ile
 50 55 60
 Leu Thr Pro Met Ala Arg Phe Tyr Gln Glu Tyr Trp Asp Asn Leu Leu
 65 70 75 80
 Arg Leu Asn Tyr Pro His Glu Leu Ile Thr Leu Gly Phe Ile Leu Pro
 85 90 95
 Lys Thr Lys Glu Gly Asn Gln Ala Thr Ser Met Leu Gln Lys Gln Ile
 100 105 110
 Gln Lys Thr Gln Asn Tyr Gly Pro Glu Lys Asp Arg Phe Lys Ser Ile
 115 120 125
 Ile Ile Leu Arg Gln Asp Phe Asp Pro Ala Val Val Ser Gln Asp Glu
 130 135 140
 Ser Glu Arg His Lys Leu Ala Asn Gln Lys Ala Arg Arg Glu Val Met
 145 150 155 160
 Ala Lys Ala Arg Asn Ser Leu Leu Phe Thr Thr Leu Gly Pro Ser Thr
 165 170 175
 Ser Trp Val Leu Trp Leu Asp Ala Asp Ile Thr Glu Thr Ala Pro Thr
 180 185 190
 Leu Ile Gln Asp Leu Ala Ser His Asp Lys Pro Ile Ile Val Ala Asn
 195 200 205
 Cys Phe Gln Lys Tyr Tyr Asp Pro Glu Ser Lys Lys Met Ala Glu Arg
 210 215 220
 Pro Tyr Asp Phe Asn Ser Trp Gln Asp Ser Glu Thr Ala Leu Lys Met
 225 230 235 240
 Ala Glu Gln Met Gly Pro Asp Asp Ile Leu Leu Glu Gly Tyr Ala Glu
 245 250 255
 Met Ala Thr Tyr Arg Thr Leu Leu Ala Tyr Met Ser Thr Pro Gly Gly
 260 265 270
 Ser Lys Asp Leu Val Val Pro Leu Asp Gly Val Gly Gly Thr Ala Leu
 275 280 285
 Leu Val Lys Ala Asp Val His Arg Asp Gly Ala Met Phe Pro Pro Phe

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290 295 300
Ala Phe Tyr His Leu Ile Glu Ser Glu Gly Phe Ala Lys Met Ala Lys
305 310 315 320
Arg Leu Gly Trp Gln Pro Tyr Gly Leu Pro Asn Tyr Lys Val Tyr His
325 330 335
Tyr Asn Glu

<210> 54
<211> 31
<212> PRT
<213> Trichoderma reesei

<400> 54
Met Leu Leu Pro Lys Gly Gly Leu Asp Trp Arg Ser Ala Arg Ala Gln
1 5 10 15
Ile Pro Pro Thr Arg Ala Leu Trp Asn Ala Val Thr Arg Thr Arg
20 25 30

<210> 55
<211> 15
<212> PRT
<213> Trichoderma reesei

<400> 55
Phe Ile Leu Leu Val Gly Ile Thr Gly Leu Ile Leu Leu Leu Trp
1 5 10 15

<210> 56
<211> 358
<212> PRT
<213> Trichoderma reesei

<400> 56
Arg Gly Val Ser Thr Ser Ala Ser Glu Met Gln Ser Phe Tyr Cys Trp
1 5 10 15
Gly Pro Ala Lys Pro Pro Met Glu Met Ser Pro Asn Glu His Asn Arg
20 25 30
Trp Asn Gly His Leu Gln Thr Pro Val Ile Phe Asn His His Ala Pro
35 40 45
Val Glu Val Asn Ser Ser Thr Ile Glu His Val Asp Leu Asn Pro Ile
50 55 60
Asn Ser Thr Lys Gln Ala Val Thr Lys Glu Glu Arg Ile Leu Ile Leu
65 70 75 80
Thr Pro Leu Lys Asp Ala Ala Pro Tyr Leu Ser Lys Tyr Phe Glu Leu
85 90 95
Leu Ala Glu Leu Thr Tyr Pro His Arg Leu Ile Asp Leu Ala Phe Leu
100 105 110
Val Ser Asp Ser Thr Asp Asp Thr Leu Ala Val Leu Ala Ser Glu Leu
115 120 125
Asp Arg Ile Gln Lys Arg Pro Asp Gln Ile Pro Phe His Ser Ala Thr
130 135 140
Val Ile Glu Lys Asp Phe Gly Phe Lys Leu Ser Gln Asn Val Glu Glu
145 150 155 160
Arg His Ser Phe Glu Ala Gln Gly Pro Arg Arg Lys Ala Met Gly Arg
165 170 175
Ala Arg Asn Tyr Leu Leu Tyr Thr Ala Leu Lys Pro Glu His Ser Trp
180 185 190
Val Tyr Trp Arg Asp Val Asp Ile Val Asp Ser Pro Thr Gly Ile Leu
195 200 205
Glu Asp Phe Ile Ala His Asp Arg Asp Ile Leu Val Pro Asn Ile Trp
210 215 220
Phe His Arg Tyr Arg Asp Gly Val Asp Ile Glu Gly Arg Phe Asp Tyr
225 230 235 240
Asn Ser Trp Val Glu Ser Asp Lys Gly Arg Lys Leu Ala Asn Ser Leu

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Asp	Lys	Asp	Val	245	Val	Leu	Ala	Glu	Gly	250	Tyr	Lys	Gln	Tyr	Asp	255	Thr	Gly
Arg	Thr	Tyr	Met	260	Ala	Lys	Met	Gly	265	Asp	Trp	Arg	Glu	Asn	Lys	Asp	Val	
Glu	Leu	Glu	Leu	275	Asp	Gly	Ile	Gly	280	Gly	Val	Asn	Ile	Leu	Val	Lys	Ala	
Asp	Val	His	Arg	290	Ser	Gly	Ile	Asn	300	Phe	Pro	Cys	Tyr	Ala	Phe	Glu	Asn	
305	Gln	Ala	Glu	310	Thr	Glu	Gly	Phe	315	Ala	Lys	Arg	Ala	Gly	Tyr			
Glu	Val	Tyr	Gly	325	Leu	Pro	Asn	Tyr	330	Val	Trp	His	Ile	Asp	Thr	Glu		
Glu	Lys	Gly	Gly	340	Asn	Ala			345					350				
				355														

<210> 57
 <211> 45
 <212> PRT
 <213> Trichoderma reesei

<400> 57
 Met Met Pro Arg His His Ser Ser Gly Phe Ser Asn Gly Tyr Pro Arg
 1 5 10 15
 Ala Asp Thr Phe Glu Ile Ser Pro His Arg Phe Gln Pro Arg Ala Thr
 20 25 30
 Leu Pro Pro His Arg Lys Arg Lys Arg Thr Ala Ile Arg
 35 40 45

<210> 58
 <211> 16
 <212> PRT
 <213> Trichoderma reesei

<400> 58
 Val Gly Ile Ala Val Val Val Ile Leu Val Leu Val Leu Trp Phe Gly
 1 5 10 15

<210> 59
 <211> 407
 <212> PRT
 <213> Trichoderma reesei

<400> 59
 Gln Pro Arg Ser Val Ala Ser Leu Ile Ser Leu Gly Ile Leu Ser Gly
 1 5 10 15
 Tyr Asp Asp Leu Lys Leu Glu Thr Val Arg Tyr Tyr Asp Leu Ser Asn
 20 25 30
 Val Gln Gly Thr Ala Arg Gly Trp Glu Arg Glu Glu Arg Ile Leu Leu
 35 40 45
 Cys Val Pro Leu Arg Asp Ala Glu Gln His Leu Pro Met Phe Phe Ser
 50 55 60
 His Leu Lys Asn Phe Thr Tyr Pro His Asn Leu Ile Asp Leu Ala Phe
 65 70 75 80
 Leu Val Ser Asp Ser Lys Asp His Thr Leu Glu Ser Leu Thr Glu His
 85 90 95
 Leu Glu Ala Ile Gln Ala Asp Pro Asp Pro Lys Gln Pro Tyr Gly Glu
 100 105 110
 Ile Ser Ile Ile Glu Lys Asp Phe Gly Gln Lys Val Asn Gln Asp Val
 115 120 125
 Glu Ser Arg His Gly Phe Ala Ala Gln Ala Ser Arg Arg Lys Leu Met
 130 135 140
 Ala Gln Ala Arg Asn Trp Leu Leu Ser Ala Ala Leu Arg Pro Tyr His
 145 150 155 160
 Ser Trp Val Tyr Trp Arg Asp Val Asp Val Glu Thr Ala Pro Phe Thr

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Ile	Leu	Glu	Asp	165	Leu	Met	Arg	His	Asn	170	Lys	Asp	Val	Ile	Val	175	Pro	Asn
Val	Trp	Arg	Pro	180	Leu	Pro	Asp	Trp	Leu	185	Gly	Gly	Glu	Gln	Pro	190	Tyr	Asp
Leu	Asn	Ser	Trp	195	Gln	Glu	Ser	Glu	Thr	200	Ala	Leu	Ala	Leu	Ala	205	Asp	Thr
Leu	Asp	Glu	Asp	210	Ala	Val	Ile	Val	Glu	215	Gly	Tyr	Ala	Glu	Tyr	220	Ala	Thr
225	Trp	Arg	Pro	His	230	Leu	Ala	Tyr	Leu	Arg	Asp	Pro	Tyr	Gly	Asp	235	Pro	Asp
Met	Glu	Met	Glu	245	Ile	Asp	Gly	Val	Gly	250	Gly	Val	Ser	Ile	Leu	255	Ala	Lys
Ala	Lys	Val	Phe	260	Arg	Ala	Gly	Val	His	265	Phe	Pro	Ala	Phe	Ser	270	Phe	Glu
Lys	His	Ala	Glu	275	Thr	Glu	Gly	Phe	Gly	280	Lys	Met	Ala	Lys	Arg	285	Met	His
Phe	Ser	Val	Val	290	Gly	Leu	Pro	His	Tyr	295	Thr	Ile	Trp	His	Leu	300	Tyr	Glu
305	Pro	Ser	Val	Asp	310	Ile	Lys	His	Met	315	Glu	Glu	Met	Glu	Arg	320	Glu	Arg
Ile	Ala	Arg	Glu	325	Lys	Glu	Glu	Glu	Glu	330	Arg	Lys	Lys	Lys	Glu	335	Ala	Gln
Ile	Lys	Glu	Glu	340	Phe	Gly	Asp	Ala	Asn	345	Ser	Gln	Trp	Glu	Gln	350	Asp	Lys
Gln	Gln	Met	Gln	355	Asp	Leu	Lys	Leu	Gln	360	Asp	Arg	Gly	Gly	Asp	365	Lys	Glu
370	Ala	Ala	Ala	Ala	Gly	Val	Asn	Gln	Gly	375	Ala	Ala	Ala	Lys	Ala	380	Ala	Gly
385	Ala	Met	Glu	Gly	390	Gln	Lys	Asn		395						400		
				405														

<210> 60
 <211> 119
 <212> PRT
 <213> Trichoderma reesei

<400> 60

Met	Ser	Leu	Ser	Arg	Ser	Pro	Ser	Pro	Val	Pro	Gly	Gly	Gly	Trp	Ser
1				5					10					15	
Ser	Pro	Gly	Leu	Asn	Ile	Asn	Ser	Gly	Arg	Ser	Ser	Pro	Ser	Asn	Ala
			20					25					30		
Ala	Gly	Ser	Ser	Val	Ser	Trp	Glu	Ser	Ala	Lys	Met	Arg	Lys	Gln	Gly
		35					40					45			
Ala	Asn	Gly	Tyr	Pro	Ser	Phe	Ser	Thr	Gln	Asn	Gln	Gly	Phe	Phe	Thr
	50					55					60				
Arg	His	Met	Arg	Arg	Ile	Ser	Ser	Ser	Leu	Pro	Arg	Phe	Ala	Ala	Gly
65				70					75					80	
Pro	Gly	Asn	Thr	Tyr	Ala	Glu	Arg	Glu	Lys	Tyr	Glu	Arg	Gly	Gly	His
			85					90					95		
Ser	Pro	His	Ala	Gly	Gly	Gly	Arg	Leu	Arg	Ala	Phe	Leu	Ala	Arg	Ile
		100						105					110		
Gly	Arg	Arg	Leu	Lys	Trp	Arg									
		115													

<210> 61
 <211> 15
 <212> PRT
 <213> Trichoderma reesei

<400> 61

Ile	Leu	Leu	Pro	Leu	Ile	Ile	Ile	Cys	Thr	Ile	Val	Ala	Tyr	Tyr
1				5					10					15

<210> 62

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<211> 325
 <212> PRT
 <213> Trichoderma reesei

<400> 62
 Gly Thr His Glu Ala Pro Gly Phe Val His Trp Trp Arg Arg Ile Ser
 1 5 10 15
 Met Gly Gly Gly Glu Lys Phe Val Ile Ile Leu Gly Ala Asn Val
 20 25 30
 Gly Gly Gly Val Met Glu Trp Lys Gly Ala Arg Glu Trp Ala Ile Glu
 35 40 45
 Arg Asp Ser Val Arg Asn Lys Arg Lys Tyr Ala Thr Arg Trp Gly Tyr
 50 55 60
 Asp Leu Glu Ile Val Asp Met Lys Thr Lys Lys Arg Tyr Ala His Glu
 65 70 75 80
 Trp Arg Glu Ser Trp Glu Lys Val Asp Phe Ile Arg Ala Ala Met Arg
 85 90 95
 Lys Tyr Pro Lys Ala Glu Trp Phe Trp Trp Leu Asp Leu Asn Thr Tyr
 100 105 110
 Val Met Glu Pro Ser Tyr Ser Leu Gln Arg His Leu Phe Asn His Leu
 115 120 125
 Asp Arg His Val Tyr Arg Asp Ile Asn Val Phe Asn Pro Leu Asn Ile
 130 135 140
 Thr His Pro Pro Thr Glu Glu Tyr Leu Asp Ala Glu Ala Arg Ser Pro
 145 150 155 160
 Val Gly Asp Gly Asn Ile Asn Ser Val Asn Leu Met Leu Thr Gln Asp
 165 170 175
 Cys Ser Gly Phe Asn Leu Gly Ser Phe Phe Ile Arg Arg Ser Ala Trp
 180 185 190
 Thr Glu Gln Leu Leu Asp Ile Trp Trp Asp Pro Val Leu Tyr Glu Gln
 195 200 205
 Lys His Met Glu Trp Glu His Lys Glu Gln Asp Ala Leu Glu Gln Leu
 210 215 220
 Tyr Arg Thr Gln Pro Trp Ile Arg Gln His Thr Gly Phe Leu Pro Gln
 225 230 235 240
 Arg Leu Ile Asn Ser Phe Pro Pro Ala Ala Cys Ala Asp Glu Ser Gly
 245 250 255
 Leu Asn Asn Thr Arg Ile His Tyr Asn Glu Lys Asp Arg Asp Phe Val
 260 265 270
 Val Asn Met Ala Gly Cys Glu Trp Gly Arg Asp Cys Trp Gly Glu Met
 275 280 285
 Tyr His Tyr Arg Glu Phe Ser Tyr Trp Leu Asn Arg Asn Pro Trp Glu
 290 295 300
 Leu Phe Lys Glu Glu Ile Val Ala Val Ile Trp Tyr Lys Leu Thr Gly
 305 310 315 320
 Gln Arg Val Lys Leu
 325

<210> 63
 <211> 33
 <212> PRT
 <213> Trichoderma reesei

<400> 63
 Met His Phe Ala Tyr Pro Ser Arg Lys Ser Ser Asn Pro Pro Pro Phe
 1 5 10 15
 Arg Pro Arg Ser Thr Arg Leu Pro Gly Leu Arg Arg Ser Arg Ile Lys
 20 25 30
 Thr

<210> 64
 <211> 15
 <212> PRT
 <213> Trichoderma reesei

eolf-seql

<400> 64

Ile Gly Ile Val Leu Phe Leu Val Leu Ala Thr Leu Trp Phe Phe
1 5 10 15

<210> 65

<211> 262

<212> PRT

<213> Trichoderma reesei

<400> 65

Ser Asn Pro Arg Val Pro Arg Pro Asp Pro Glu Arg Val Pro Ser Gly
1 5 10 15
Arg Pro Pro Val Val Leu Val Thr Val Ile Asp Pro Thr Gln Tyr Pro
20 25 30
Asn Ala Tyr Leu Lys Thr Ile Lys Glu Asn Arg Glu Gln Tyr Ala Ala
35 40 45
Lys His Gly Tyr Glu Ala Phe Ile Val Lys Ala Tyr Asp Tyr Asp Thr
50 55 60
Gln Gly Ala Pro Gln Ser Trp Ser Lys Leu Met Ala Met Arg His Ala
65 70 75 80
Leu Thr Lys Phe Pro Glu Cys Arg Phe Val Trp Tyr Leu Asp Gln Asp
85 90 95
Ala Tyr Ile Met Asp Met Ser Lys Ser Leu Glu Glu Gln Leu Leu Asn
100 105 110
Arg Gln Lys Leu Glu Ser Leu Met Ile Lys Asn Tyr Pro Val Val Pro
115 120 125
Pro Asp Ser Ile Ile Lys Thr Phe Ser His Leu Arg Pro Asp Glu Val
130 135 140
Asp Leu Ile Val Ser Gln Asp Ser Ser Gly Leu Val Ala Gly Ser Val
145 150 155 160
Val Val Arg Asn Ser Gln Trp Ser Lys Phe Leu Leu Glu Thr Trp Met
165 170 175
Asp Pro Leu Tyr Arg Ser Tyr Asn Phe Gln Lys Ala Glu Arg His Ala
180 185 190
Leu Glu His Ile Val Gln Trp His Pro Thr Ile Leu Ser Lys Leu Ala
195 200 205
Leu Val Pro Gln Arg Thr Leu Gly Pro Tyr Thr Arg Thr Asp Gln Gly
210 215 220
Asp Ala Tyr Gln Asp Gly Asp Phe Val Val Met Phe Thr Gly Cys Thr
225 230 235 240
Lys Ser Gly Glu Gln Ser Cys Glu Thr Val Ser Ala Ser Tyr Tyr Gln
245 250 255
Lys Trp Ser Ser Ser Leu
260

<210> 66

<211> 90

<212> PRT

<213> Trichoderma reesei

<400> 66

Met Ile Arg Asp Pro Phe Gly Ile His Ser Lys Asn Ala Phe Lys Ala
1 5 10 15
Thr Ala Leu Arg Ala Ala Arg Asp Ile Lys Glu Ala Ala Thr Gln Ala
20 25 30
Gly Ala Asn Ala Leu Glu Met Ser Phe Ser Leu Pro Lys His Val Pro
35 40 45
Asp Phe Gly Asp Pro Ser Arg Ala Leu Glu Asp Arg Ala Trp Ala Ala
50 55 60
Leu Leu Pro Met Tyr Lys Asp Lys Pro Tyr Ala Tyr Ala Pro Ser Met
65 70 75 80
Arg Leu Arg Pro Trp Trp Arg Arg Arg Lys
85 90

<210> 67

colf-seql

<211> 19
<212> PRT
<213> Trichoderma reesei

<400> 67
Val Leu Gly Met Ile Ala Ala Ala Val Met Phe Val Leu Tyr Val Thr
1 5 10 15
Gly Phe Phe

<210> 68
<211> 565
<212> PRT
<213> Trichoderma reesei

<400> 68
Ser Ser Gly Gln Thr Glu Glu Ala Lys Lys Lys Ala Ser Gly Ser Ala
1 5 10 15
Phe Ser Trp Leu Gly Leu Ser Gln Glu Arg Gly Gly Val Asp Trp Asp
20 25 30
Glu Arg Arg Lys Ser Val Val Glu Ala Phe Glu Val Trp Asp Ala Tyr
35 40 45
Glu Arg Tyr Ala Trp Gly Lys Asp Glu Phe His Pro Ile Ser Lys Asn
50 55 60
Gly Arg Asn Met Ala Pro Lys Gly Leu Gly Trp Ile Ile Asp Ser
65 70 75 80
Leu Asp Thr Met Met Leu Met Asn Gln Thr Thr Arg Leu Gln His Ala
85 90 95
Arg Glu Trp Ile Ser Thr Ser Leu Thr Trp Asp Gln Asp Gln Asp Val
100 105 110
Asn Thr Phe Glu Thr Thr Ile Arg Met Leu Gly Gly Leu Leu Ser Ala
115 120 125
His Tyr Leu Ser Thr Glu Phe Pro Glu Leu Ala Pro Leu Thr Glu Asp
130 135 140
Asp Glu Gly Ala Pro Gly Glu Asp Leu Tyr Leu Glu Lys Ala Lys Asp
145 150 155 160
Leu Ala Asp Arg Leu Ser Ala Phe Glu Ser Glu Ser Gly Ile Pro
165 170 175
Tyr Ala Ser Val Asn Ile Gly Glu Tyr Lys Gly Pro Ser His Ser Asp
180 185 190
Asn Gly Ala Ser Ser Thr Ala Glu Ala Thr Thr Leu Gln Leu Glu Phe
195 200 205
Lys Tyr Leu Ala Lys Leu Thr Gly Glu Lys Asn Phe Trp Asp Lys Val
210 215 220
Glu Lys Val Met Glu Val Val Asp Asp Asn Gln Pro Glu Asp Gly Leu
225 230 235 240
Val Pro Ile Tyr Ile Tyr Ala Thr Thr Gly Glu Phe Arg Gly Gln Asn
245 250 255
Ile Arg Leu Gly Ser Arg Gly Asp Ser Tyr Tyr Glu Tyr Leu Ile Lys
260 265 270
Gln Tyr Leu Gln Thr Asn Lys Gln Glu Pro Ile Tyr Glu Glu Met Trp
275 280 285
Asp Glu Ala Leu Ala Gly Val Arg Lys His Leu Val Thr Tyr Thr Glu
290 295 300
Pro Ser Glu Phe Thr Ile Ile Ala Glu Arg Pro Asp Gly Leu Glu His
305 310 315 320
Pro Met Ser Pro Lys Met Asp His Leu Val Cys Phe Met Pro Gly Thr
325 330 335
Ile Ala Leu Ala Ala Thr Gly Gly Leu Thr Glu Ala Glu Ala Arg Lys
340 345 350
Leu Ser Thr Trp Asn Lys Lys Lys Asp Asp Asp Met Gln Leu Ala Arg
355 360 365
Glu Leu Met His Thr Cys Trp Gly Met Tyr Lys Tyr Met Lys Thr Gly
370 375 380
Leu Ala Pro Glu Ile Met Tyr Phe Asn Ile Pro Asn Pro Pro Pro Glu
385 390 395 400
Ser Ser Ala Pro His Gln Ala Pro Ala Ala Phe Asp Glu Asp Pro His

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Ala	Glu	Trp	Arg	Lys	Asp	Phe	Val	Val	His	Ser	Asn	Asp	Val	His	Asn
			420					425					430		
Leu	Gln	Arg	Pro	Glu	Thr	Val	Glu	Ser	Leu	Phe	Tyr	Met	Trp	Arg	Ile
		435					440					445			
Thr	Gly	Asp	Val	Lys	Tyr	Arg	Glu	Trp	Gly	Trp	Asp	Met	Phe	Lys	Ser
	450					455					460				
Phe	Val	Asn	Tyr	Thr	Ala	Val	Glu	Asp	Gln	Gly	Gly	Phe	Thr	Ser	Leu
465					470					475					480
Leu	Asp	Ala	Asn	Ser	Ile	Pro	Pro	Thr	Pro	Lys	Asp	Asn	Met	Glu	Ser
			485						490					495	
Phe	Trp	Leu	Ala	Glu	Thr	Leu	Lys	Tyr	Met	Tyr	Leu	Leu	Phe	Ser	Pro
			500					505					510		
Asn	Asp	Val	Leu	Pro	Leu	His	Lys	Ile	Val	Leu	Asn	Thr	Glu	Ala	His
		515					520					525			
Pro	Phe	Pro	Arg	Phe	Asp	Met	Gly	Pro	Leu	Phe	Ser	Thr	Gly	Trp	Lys
	530				535						540				
Arg	Lys	Pro	Arg	Asp	Gly	Ser	Ala	Lys	Lys	Lys	Ala	Thr	Thr	Ala	Ala
545					550					555					560
Thr	Thr	Asp	Ala	Glu											
				565											

<210> 69
 <211> 7
 <212> PRT
 <213> Trichoderma reesei

<400> 69
 Met Ala Arg Arg Arg Tyr Arg
 1 5

<210> 70
 <211> 15
 <212> PRT
 <213> Trichoderma reesei

<400> 70
 Leu Phe Met Ile Cys Ala Ala Val Ile Leu Phe Leu Leu Tyr Arg
 1 5 10 15

<210> 71
 <211> 871
 <212> PRT
 <213> Trichoderma reesei

<400> 71
 Val Ser Gln Asn Thr Trp Asp Asp Ser Ala His Tyr Ala Thr Leu Arg
 1 5 10 15
 His Pro Pro Ala Ser Asn Pro Pro Ala Ala Gly Gly Glu Ser Pro Leu
 20 25 30
 Lys Pro Ala Ala Lys Pro Glu His Glu His Glu Asn Gly Tyr
 35 40 45
 Ala Pro Glu Ser Lys Pro Lys Pro Gln Ser Glu Pro Lys Pro Glu Ser
 50 55 60
 Lys Pro Ala Pro Glu His Ala Ala Gly Gly Gln Lys Ser Gln Gly Lys
 65 70 75 80
 Pro Ser Tyr Glu Asp Glu Glu Thr Gly Lys Asn Pro Pro Lys Ser
 85 90 95
 Ala Val Ile Pro Ser Asp Thr Arg Leu Pro Pro Asp Asn Lys Val His
 100 105 110
 Trp Arg Pro Val Lys Glu His Phe Pro Val Pro Ser Glu Ser Val Ile
 115 120 125
 Ser Leu Pro Thr Gly Lys Pro Leu Lys Val Pro Arg Val Gln His Glu
 130 135 140
 Phe Gly Val Glu Ser Pro Glu Ala Lys Ser Arg Arg Val Ala Arg Gln

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145	Glu	Arg	Val	Gly	Lys	150	Glu	Ile	Glu	Arg	Ala	155	Trp	Ser	Gly	Tyr	Lys	160	Lys
					165						170						175		
	Phe	Ala	Trp	Met	His	Asp	Glu	Leu	Ser	Pro	Val	Ser	Ala	Lys	His	Arg			
				180					185						190				
	Asp	Pro	Phe	Cys	Gly	Trp	Ala	Ala	Thr	Leu	Val	Asp	Ser	Leu	Asp	Thr			
			195					200					205						
	Leu	Trp	Ile	Ala	Gly	Leu	Lys	Glu	Gln	Phe	Asp	Glu	Ala	Ala	Arg	Ala			
		210					215					220							
	Val	Glu	Gln	Ile	Asp	Phe	Thr	Thr	Thr	Pro	Arg	Asn	Asn	Ile	Pro	Val			
		225				230					235					240			
	Phe	Glu	Thr	Thr	Ile	Arg	Tyr	Leu	Gly	Gly	Leu	Leu	Gly	Ala	Phe	Asp			
				245						250					255				
	Val	Ser	Gly	Gly	His	Asp	Gly	Gly	Tyr	Pro	Met	Leu	Leu	Thr	Lys	Ala			
			260						265					270					
	Val	Glu	Leu	Ala	Glu	Ile	Leu	Met	Gly	Ile	Phe	Asp	Thr	Pro	Asn	Arg			
			275					280					285						
	Met	Pro	Ile	Leu	Tyr	Tyr	Gln	Trp	Gln	Pro	Glu	Tyr	Ala	Ser	Gln	Pro			
		290					295					300							
	His	Arg	Ala	Gly	Ser	Val	Gly	Ile	Ala	Glu	Leu	Gly	Thr	Leu	Ser	Met			
		305				310					315					320			
	Glu	Phe	Thr	Arg	Leu	Ala	Gln	Leu	Thr	Ser	Gln	Tyr	Lys	Tyr	Tyr	Asp			
				325						330					335				
	Ala	Val	Asp	Arg	Ile	Thr	Asp	Ala	Leu	Ile	Glu	Leu	Gln	Lys	Gln	Gly			
			340						345					350					
	Thr	Ser	Ile	Pro	Gly	Leu	Phe	Pro	Glu	Asn	Leu	Asp	Ala	Ser	Gly	Cys			
			355					360					365						
	Asn	His	Thr	Ala	Thr	Ala	Leu	Arg	Ser	Ser	Leu	Ser	Glu	Ala	Ala	Gln			
		370					375					380							
	Lys	Gln	Met	Asp	Glu	Asp	Leu	Ser	Asn	Lys	Pro	Glu	Asn	Tyr	Arg	Pro			
		385				390					395					400			
	Gly	Lys	Asn	Ser	Lys	Ala	Asp	Pro	Gln	Thr	Val	Glu	Lys	Gln	Pro	Ala			
				405						410					415				
	Lys	Lys	Gln	Asn	Glu	Pro	Val	Glu	Lys	Ala	Lys	Gln	Val	Pro	Thr	Gln			
			420						425					430					
	Gln	Thr	Ala	Lys	Arg	Gly	Lys	Pro	Pro	Phe	Gly	Ala	Asn	Gly	Phe	Thr			
			435					440					445						
	Ala	Asn	Trp	Asp	Cys	Val	Pro	Gln	Gly	Leu	Val	Val	Gly	Gly	Tyr	Gly			
		450					455				460								
	Phe	Gln	Gln	Tyr	His	Met	Gly	Gly	Gly	Gln	Asp	Ser	Ala	Tyr	Glu	Tyr			
		465				470				475					480				
	Phe	Pro	Lys	Glu	Tyr	Leu	Leu	Leu	Gly	Gly	Leu	Glu	Ser	Lys	Tyr	Gln			
				485					490					495					
	Lys	Leu	Tyr	Val	Asp	Ala	Val	Glu	Ala	Ile	Asn	Glu	Trp	Leu	Leu	Tyr			
			500						505				510						
	Arg	Pro	Met	Thr	Asp	Gly	Asp	Trp	Asp	Ile	Leu	Phe	Pro	Ala	Lys	Val			
			515					520					525						
	Ser	Thr	Ala	Gly	Asn	Pro	Ser	Gln	Asp	Leu	Val	Ala	Thr	Phe	Glu	Val			
		530					535					540							
	Thr	His	Leu	Thr	Cys	Phe	Ile	Gly	Gly	Met	Tyr	Gly	Leu	Gly	Gly	Lys			
		545				550				555					560				
	Ile	Phe	Gly	Arg	Glu	Lys	Asp	Leu	Glu	Thr	Ala	Lys	Arg	Leu	Thr	Asp			
				565						570				575					
	Gly	Cys	Val	Trp	Ala	Tyr	Gln	Ser	Thr	Val	Ser	Gly	Ile	Met	Pro	Glu			
			580						585					590					
	Gly	Ser	Gln	Val	Leu	Ala	Cys	Pro	Thr	Leu	Glu	Lys	Cys	Asp	Phe	Asn			
			595					600					605						
	Glu	Thr	Leu	Trp	Trp	Glu	Lys	Leu	Asp	Pro	Ala	Lys	Asp	Trp	Arg	Asp			
		610					615					620							
	Lys	Gln	Val	Ala	Asp	Asp	Lys	Asp	Lys	Ala	Thr	Val	Gly	Glu	Ala	Leu			
		625				630					635					640			
	Lys	Glu	Thr	Ala	Asn	Ser	His	Asp	Ala	Ala	Gly	Gly	Ser	Lys	Ala	Val			
				645						650					655				
	His	Lys	Arg	Ala	Ala	Val	Pro	Leu	Pro	Lys	Pro	Gly	Ala	Asp	Asp	Asp			
			660						665				670						
	Val	Gly	Ser	Glu	Leu	Pro	Gln	Ser	Leu	Lys	Asp	Lys	Ile	Gly	Phe	Lys			
			675					680					685						
	Asn	Gly	Glu	Gln	Lys	Lys	Pro	Thr	Gly	Ser	Ser	Val	Gly	Ile	Gln	Arg			

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        690                695                700
Asp Pro Asp Ala Pro Val Asp Ser Val Leu Glu Ala His Arg Leu Pro
705
Pro Gln Glu Pro Glu Glu Gln Gln Val Ile Leu Pro Asp Lys Pro Gln
        710                715                720
        725                730                735
Thr His Glu Glu Phe Val Lys Gln Arg Ile Ala Glu Met Gly Phe Ala
        740                745                750
Pro Gly Val Val His Ile Gln Ser Arg Gln Tyr Ile Leu Arg Pro Glu
        755                760                765
Ala Ile Glu Ser Val Trp Tyr Met Tyr Arg Ile Thr Gly Asp Pro Ile
        770                775                780
Trp Met Glu Lys Gly Trp Lys Met Phe Glu Ala Thr Ile Arg Ala Thr
785
Arg Thr Glu Ile Ala Asn Ser Ala Ile Asp Asp Val Asn Ser Glu Glu
        790                800                805
Pro Gly Leu Lys Asp Glu Met Glu Ser Phe Trp Leu Ala Glu Thr Leu
        810                815                820
Lys Tyr Tyr Tyr Leu Leu Phe Ser Glu Pro Ser Val Ile Ser Leu Asp
        825                830                835
Glu Trp Val Leu Asn Thr Glu Ala His Pro Phe Lys Arg Pro Gly Gly
        840                845                850
Ser Val Ile Gly His Ser Ile
865                870

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<210> 72
 <211> 13
 <212> PRT
 <213> Trichoderma reesei

<400> 72
 Met Leu Asn Gln Leu Gln Gly Arg Val Pro Arg Arg Tyr
 1 5 10

<210> 73
 <211> 15
 <212> PRT
 <213> Trichoderma reesei

<400> 73
 Ile Ala Leu Val Ala Phe Ala Phe Phe Val Ala Phe Leu Leu Trp
 1 5 10 15

<210> 74
 <211> 542
 <212> PRT
 <213> Trichoderma reesei

<400> 74
 Ser Gly Tyr Asp Phe Val Pro Arg Thr Ala Thr Val Gly Arg Phe Lys
 1 5 10 15
 Tyr Val Pro Ser Tyr Asp Trp Ser Lys Ala Lys Val Tyr Tyr Pro
 20 25 30
 Val Lys Asp Met Lys Thr Leu Pro Gln Gly Thr Pro Val Thr Phe Pro
 35 40 45
 Arg Leu Gln Leu Arg Asn Gln Ser Glu Ala Gln Asp Asp Thr Thr Lys
 50 55 60
 Ala Arg Lys Gln Ala Val Lys Asp Ala Phe Val Lys Ser Trp Glu Ala
 65 70 75 80
 Tyr Lys Thr Tyr Ala Trp Thr Lys Asp Gln Leu Gln Pro Leu Ser Leu
 85 90 95
 Ser Gly Lys Glu Thr Phe Ser Gly Trp Ser Ala Gln Leu Val Asp Ala
 100 105 110
 Leu Asp Thr Leu Trp Ile Met Asp Leu Lys Asp Asp Phe Phe Leu Ala
 115 120 125
 Val Lys Glu Val Ala Val Ile Asp Trp Ser Lys Thr Lys Asp Asn Lys

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Val	Ile	Asn	Leu	Phe	Glu	Val	Thr	Ile	Arg	Tyr	Leu	Gly	Gly	Leu	Ile
130	145				150	135				155	140				160
Ala	Ala	Tyr	Asp	Leu	Ser	Gln	Glu	Pro	Val	Leu	Arg	Ala	Lys	Ala	Ile
				165					170					175	
Glu	Leu	Gly	Asp	Thr	Leu	Tyr	Ala	Thr	Phe	Asp	Thr	Pro	Asn	Arg	Leu
			180					185					190		
Pro	Ser	His	Trp	Leu	Asp	Tyr	Ser	Lys	Ala	Lys	Lys	Gly	Thr	Gln	Arg
		195					200					205			
Ala	Asp	Asp	Ser	Met	Ser	Gly	Ala	Ala	Gly	Gly	Thr	Leu	Cys	Met	Glu
	210					215					220				
Phe	Thr	Arg	Leu	Ser	Gln	Ile	Thr	Gly	Asp	Pro	Lys	Tyr	Tyr	Asp	Ala
225					230					235					240
Thr	Glu	Arg	Ile	Lys	Gln	Phe	Phe	Tyr	Arg	Phe	Gln	Asn	Glu	Thr	Thr
				245					250					255	
Leu	Pro	Gly	Met	Trp	Pro	Val	Met	Met	Asn	Tyr	Arg	Glu	Glu	Thr	Met
			260				265						270		
Val	Glu	Ser	Arg	Tyr	Ser	Met	Gly	Gly	Ser	Ala	Asp	Ser	Leu	Tyr	Glu
		275					280					285			
Tyr	Leu	Val	Lys	Met	Pro	Ala	Leu	Leu	Gly	Gly	Leu	Asp	Pro	Gln	Tyr
	290					295					300				
Pro	Glu	Met	Ala	Ile	Arg	Ala	Leu	Asp	Thr	Ala	Arg	Asp	Asn	Leu	Leu
305					310					315					320
Phe	Arg	Pro	Met	Thr	Glu	Lys	Gly	Asp	Asn	Ile	Leu	Ala	Leu	Gly	Asn
				325					330					335	
Ala	Leu	Val	Asp	His	Gly	Asn	Val	Gln	Arg	Ile	Thr	Glu	Met	Gln	His
			340					345					350		
Leu	Thr	Cys	Phe	Ala	Gly	Gly	Met	Tyr	Ala	Met	Ala	Gly	Lys	Leu	Phe
		355					360					365			
Lys	Arg	Asp	Asp	Tyr	Val	Asp	Leu	Gly	Ser	Arg	Ile	Ser	Ser	Gly	Cys
	370					375					380				
Val	Trp	Ala	Tyr	Asp	Ser	Phe	Pro	Ser	Gly	Ile	Met	Pro	Glu	Ser	Ala
385					390					395					400
Asp	Met	Ala	Ala	Cys	Ala	Lys	Leu	Asp	Gly	Pro	Cys	Pro	Tyr	Asp	Glu
				405					410					415	
Val	Lys	Ala	Pro	Val	Asp	Pro	Asp	Gly	Arg	Arg	Pro	His	Gly	Phe	Ile
			420					425					430		
His	Val	Lys	Ser	Arg	His	Tyr	Leu	Arg	Pro	Glu	Ala	Ile	Glu	Ser	
		435					440				445				
Val	Phe	Tyr	Met	Trp	Arg	Ile	Thr	Gly	Asp	Gln	Val	Trp	Arg	Asp	Thr
	450					455					460				
Ala	Trp	Arg	Met	Trp	Glu	Asn	Ile	Val	Arg	Glu	Ala	Glu	Thr	Glu	His
465					470					475					480
Ala	Phe	Ala	Ile	Val	Glu	Asp	Val	Thr	Arg	Thr	Ala	Ser	Lys	Leu	Thr
				485					490					495	
Asn	Asn	Tyr	Leu	Leu	Gln	Thr	Phe	Trp	Leu	Ala	Glu	Thr	Leu	Lys	Tyr
			500					505					510		
Phe	Tyr	Leu	Ile	Phe	Asp	Asp	Glu	Ser	Ala	Ile	Asp	Leu	Asp	Lys	Trp
		515					520					525			
Val	Phe	Asn	Thr	Glu	Ala	His	Pro	Phe	Lys	Arg	Pro	Ala	Val		
	530					535					540				

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 <211> 13
 <212> PRT
 <213> Trichoderma reesei

<400> 75
 Met Leu Val Val Gly Arg Pro Arg Leu Val Arg Asn Ser
 1 5 10

<210> 76
 <211> 16
 <212> PRT
 <213> Trichoderma reesei

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<400> 76

Ile Ile Leu Thr Leu Ala Ile Leu Ser Ile Trp His Leu Gly Leu Leu
1 5 10 15

<210> 77

<211> 576

<212> PRT

<213> Trichoderma reesei

<400> 77

Ser Arg Thr Pro Thr Ser Ala Ser Ala Leu Val Ser Ala Ser Val Ser
1 5 10 15
Ala Ser Ser Glu Trp Ser Arg Leu Glu Arg Leu Met Asn Arg Gly Ala
20 25 30
Pro Leu Thr Pro Tyr Pro Asp Ser Asn Ser Ser Phe Asp Trp Ser Ala
35 40 45
Ile Pro Phe Arg Tyr Pro Pro His Asn Thr Thr His Leu Pro Pro Arg
50 55 60
His Lys Gln Pro Pro Leu Pro Arg Ile Gln His Arg Phe Gly Pro Glu
65 70 75 80
Ser Pro Ala Ala Ala Lys Glu Arg Ile Lys Arg Leu Lys Ala Val Lys
85 90 95
Gln Val Phe Leu Arg Ala Trp Gln Ala Tyr Lys Gly Tyr Ala Trp Lys
100 105 110
Gln Asp Ala Leu Leu Pro Ile Ser Gly Gly Gly Arg Glu Gln Phe Ser
115 120 125
Gly Trp Ala Ala Thr Leu Val Asp Ala Leu Asp Thr Leu Trp Ile Met
130 135 140
Gly Leu Arg Glu Glu Phe Asp Glu Ala Val Ala Val Ala Glu Ile
145 150 155 160
Asp Phe Gly Ser Ser Thr Ser Ser Arg Val Asn Ile Phe Glu Thr Asn
165 170 175
Ile Arg Tyr Leu Gly Gly Leu Leu Ala Ala Tyr Asp Leu Ser Gly Arg
180 185 190
Glu Val Leu Leu Lys Lys Ala Val Glu Leu Gly Asp Leu Ile Tyr Ala
195 200 205
Gly Phe Asn Thr Glu Asn Gly Met Pro Val Asp Phe Leu Asn Phe Tyr
210 215 220
Ser Ala Lys Ser Gly Glu Gly Leu Val Val Glu Ser Ser Val Val Ser
225 230 235 240
Ala Ser Pro Gly Thr Leu Ser Leu Glu Leu Ala His Leu Ser Gln Val
245 250 255
Thr Gly Asp Asp Lys Tyr Tyr Ser Ala Val Ser Gln Val Met Asp Val
260 265 270
Phe Tyr Gln Gly Gln Asn Lys Thr Arg Leu Pro Gly Val Trp Pro Ile
275 280 285
Asp Val Asn Met Arg Ala Lys Asp Val Val Ser Gly Ser Arg Phe Thr
290 295 300
Leu Gly Gly Cys Ala Asp Ser Leu Tyr Glu Tyr Leu Pro Lys Met His
305 310 315 320
Gln Leu Leu Gly Gly Gly Glu Pro Lys Tyr Glu Thr Met Ser Arg Thr
325 330 335
Phe Leu Gln Ala Ala Asp Arg His Phe Val Phe Arg Pro Met Leu Pro
340 345 350
Gly Ala Glu Glu Asp Val Leu Met Pro Gly Asn Val Asn Val Asp Glu
355 360 365
Asp Ser Gly Glu Ala Val Leu Asp Pro Glu Thr Glu His Leu Ala Cys
370 375 380
Phe Val Gly Gly Met Phe Gly Leu Ala Gly Arg Leu Phe Ser Arg Pro
385 390 395 400
Asp Asp Val Glu Thr Gly Val Arg Leu Thr Asn Gly Cys Val Tyr Ala
405 410 415
Tyr Arg Ala Phe Pro Thr Gly Met Met Pro Glu Arg Leu Asp Leu Ala
420 425 430
Pro Cys Arg Asp Arg Ser Ser Arg Cys Pro Trp Asp Glu Glu His Trp
435 440 445
Leu Glu Glu Arg Ala Lys Arg Pro Glu Trp Glu Pro His Leu Pro Arg

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450	Gly	Phe	Thr	Ser	Ala	Lys	455	Asp	Pro	Arg	Tyr	Leu	460	Arg	Pro	Glu	Ala		
465	Ile	Glu	Ser	Val	Phe	470	Tyr	Ser	Tyr	Arg	Ile	475	Thr	Gly	Arg	Gln	480	Glu	Phe
					485	Trp	Asp	Met	Phe	490	Thr	Ala	Val	Glu	Lys	Gly	495	Thr	Arg
	Gln	Thr	Ala	Ala	500	Asn	Ala	Ala	Val	505	Leu	Asp	Val	Thr	Arg	Ala	Ala	Asp	
	Thr	Gln	Phe	Ala	515	Gln	Glu	Asp	Tyr	520	Met	Glu	Ser	Phe	Trp	Leu	Ala	Glu	Thr
	Glu	Leu	Pro	Gln	Glu	Asp	Tyr	535	Met	Phe	Thr	Thr	Pro	Asp	Ile	Ile	Ser	Leu	
	Leu	Lys	Tyr	Phe	Tyr	Leu	550	Met	Phe	Thr	Thr	Pro	540	Asp	Ile	Ile	Ser	Leu	
545	Asp	Asp	Tyr	Val	Leu	565	Asn	Thr	Glu	Ala	His	570	Pro	Phe	Lys	Leu	Val	Gly	

<210> 78

<211> 17

<212> PRT

<213> Trichoderma reesei

<400> 78

Met	Val	Met	Leu	Val	Ala	Ile	Ala	Leu	Ala	Trp	Leu	Gly	Cys	Ser	Leu
1				5					10					15	
Leu															

<210> 79

<211> 1053

<212> PRT

<213> Trichoderma reesei

<400> 79

Arg	Pro	Val	Asp	Ala	Met	Arg	Ala	Asp	Tyr	Leu	Ala	Gln	Leu	Arg	Gln
1				5					10					15	
Glu	Thr	Val	Asp	Met	Phe	Tyr	His	Gly	Tyr	Ser	Asn	Tyr	Met	Glu	His
			20					25					30		
Ala	Phe	Pro	Glu	Asp	Glu	Leu	Arg	Pro	Ile	Ser	Cys	Thr	Pro	Leu	Thr
		35					40					45			
Arg	Asp	Arg	Asp	Asn	Pro	Gly	Arg	Ile	Ser	Leu	Asn	Asp	Ala	Leu	Gly
	50					55					60				
Asn	Tyr	Ser	Leu	Thr	Leu	Ile	Asp	Ser	Leu	Ser	Thr	Leu	Ala	Ile	Leu
65					70					75					80
Ala	Gly	Gly	Pro	Gln	Asn	Gly	Pro	Tyr	Thr	Gly	Pro	Gln	Ala	Leu	Ser
			85						90					95	
Asp	Phe	Gln	Asp	Gly	Val	Ala	Glu	Phe	Val	Arg	His	Tyr	Gly	Asp	Gly
			100					105					110		
Arg	Ser	Gly	Pro	Ser	Gly	Ala	Gly	Ile	Arg	Ala	Arg	Gly	Phe	Asp	Leu
		115					120					125			
Asp	Ser	Lys	Val	Gln	Val	Phe	Glu	Thr	Val	Ile	Arg	Gly	Val	Gly	Gly
	130					135					140				
Leu	Leu	Ser	Ala	His	Leu	Phe	Ala	Ile	Gly	Glu	Leu	Pro	Ile	Thr	Gly
145					150					155					160
Tyr	Val	Pro	Arg	Pro	Glu	Gly	Val	Ala	Gly	Asp	Asp	Pro	Leu	Glu	Leu
			165						170					175	
Ala	Pro	Ile	Pro	Trp	Pro	Asn	Gly	Phe	Arg	Tyr	Asp	Gly	Gln	Leu	Leu
			180					185					190		
Arg	Leu	Ala	Leu	Asp	Leu	Ser	Glu	Arg	Leu	Leu	Pro	Ala	Phe	Tyr	Thr
		195					200					205			
Pro	Thr	Gly	Ile	Pro	Tyr	Pro	Arg	Val	Asn	Leu	Arg	Ser	Gly	Ile	Pro
	210					215					220				
Phe	Tyr	Val	Asn	Ser	Pro	Leu	His	Gln	Asn	Leu	Gly	Glu	Ala	Val	Glu
225					230					235					240
Glu	Gln	Ser	Gly	Arg	Pro	Glu	Ile	Thr	Glu	Thr	Cys	Ser	Ala	Gly	Ala
				245					250					255	
Gly	Ser	Leu	Val	Leu	Glu	Phe	Thr	Val	Leu	Ser	Arg	Leu	Thr	Gly	Asp

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Ala	Arg	Phe	260	Glu	Gln	Ala	Ala	Lys	265	Arg	Ala	Phe	Trp	Glu	270	Val	Trp	His
		275						280						285				
Arg	Arg	Ser	Glu	Ile	Gly	Leu	Ile	Gly	Asn	Gly	Ile	Asp	Ala	Glu	Arg			
	290					295						300						
Gly	Leu	Trp	Ile	Gly	Pro	His	Ala	Gly	Ile	Gly	Ala	Gly	Met	Asp	Ser			
305					310					315					320			
Phe	Phe	Glu	Tyr	Ala	Leu	Lys	Ser	His	Ile	Leu	Leu	Ser	Gly	Leu	Gly			
				325					330						335			
Met	Pro	Asn	Ala	Ser	Thr	Ser	Arg	Arg	Gln	Ser	Thr	Thr	Ser	Trp	Leu			
		340						345					350					
Asp	Pro	Asn	Ser	Leu	His	Pro	Pro	Leu	Pro	Pro	Glu	Met	His	Thr	Ser			
		355					360					365						
Asp	Ala	Phe	Leu	Gln	Ala	Trp	His	Gln	Ala	His	Ala	Ser	Val	Lys	Arg			
	370					375					380							
Tyr	Leu	Tyr	Thr	Asp	Arg	Ser	His	Phe	Pro	Tyr	Tyr	Ser	Asn	Asn	His			
385					390					395					400			
Arg	Ala	Thr	Gly	Gln	Pro	Tyr	Ala	Met	Trp	Ile	Asp	Ser	Leu	Gly	Ala			
				405					410					415				
Phe	Tyr	Pro	Gly	Leu	Leu	Ala	Leu	Ala	Gly	Glu	Val	Glu	Glu	Ala	Ile			
			420					425					430					
Glu	Ala	Asn	Leu	Val	Tyr	Thr	Ala	Leu	Trp	Thr	Arg	Tyr	Ser	Ala	Leu			
		435					440					445						
Pro	Glu	Arg	Trp	Ser	Val	Arg	Glu	Gly	Asn	Val	Glu	Ala	Gly	Ile	Gly			
	450					455					460							
Trp	Trp	Pro	Gly	Arg	Pro	Glu	Phe	Ile	Glu	Ser	Thr	Tyr	His	Ile	Tyr			
465					470					475					480			
Arg	Ala	Thr	Arg	Asp	Pro	Trp	Tyr	Leu	His	Val	Gly	Glu	Met	Val	Leu			
				485					490					495				
Arg	Asp	Ile	Arg	Arg	Arg	Cys	Tyr	Ala	Glu	Cys	Gly	Trp	Ala	Gly	Leu			
		500						505					510					
Gln	Asp	Val	Gln	Thr	Gly	Glu	Lys	Gln	Asp	Arg	Met	Glu	Ser	Phe	Phe			
		515					520					525						
Leu	Gly	Glu	Thr	Ala	Lys	Tyr	Met	Tyr	Leu	Leu	Phe	Asp	Pro	Asp	His			
	530				535						540							
Pro	Leu	Asn	Lys	Leu	Asp	Ala	Ala	Tyr	Val	Phe	Thr	Thr	Glu	Gly	His			
545					550					555					560			
Pro	Leu	Ile	Ile	Pro	Lys	Ser	Lys	Arg	Gly	Ser	Gly	Ser	His	Asn	Arg			
			565						570					575				
Gln	Asp	Arg	Ala	Arg	Lys	Ala	Lys	Lys	Ser	Arg	Asp	Val	Ala	Val	Tyr			
		580					585					590						
Thr	Tyr	Tyr	Asp	Glu	Ser	Phe	Thr	Asn	Ser	Cys	Pro	Ala	Pro	Arg	Pro			
		595					600					605						
Pro	Ser	Glu	His	His	Leu	Ile	Gly	Ser	Ala	Thr	Ala	Ala	Arg	Pro	Asp			
	610				615						620							
Leu	Phe	Ser	Val	Ser	Arg	Phe	Thr	Asp	Leu	Tyr	Arg	Thr	Pro	Asn	Val			
625					630					635					640			
His	Gly	Pro	Leu	Glu	Lys	Val	Glu	Met	Arg	Asp	Lys	Lys	Lys	Gly	Arg			
				645					650					655				
Val	Val	Arg	Tyr	Arg	Ala	Thr	Ser	Asn	His	Thr	Ile	Phe	Pro	Trp	Thr			
		660						665					670					
Leu	Pro	Pro	Ala	Met	Leu	Pro	Glu	Asn	Gly	Thr	Cys	Ala	Ala	Pro	Pro			
		675					680					685						
Glu	Arg	Ile	Ile	Ser	Leu	Ile	Glu	Phe	Pro	Ala	Asn	Asp	Ile	Thr	Ser			
	690				695						700							
Gly	Ile	Thr	Ser	Arg	Phe	Gly	Asn	His	Leu	Ser	Trp	Gln	Thr	His	Leu			
705					710					715					720			
Gly	Pro	Thr	Val	Asn	Ile	Leu	Glu	Gly	Leu	Arg	Leu	Gln	Leu	Glu	Gln			
				725					730					735				
Val	Ser	Asp	Pro	Ala	Thr	Gly	Glu	Asp	Lys	Trp	Arg	Ile	Thr	His	Ile			
		740						745					750					
Gly	Asn	Thr	Gln	Leu	Gly	Arg	His	Glu	Thr	Val	Phe	Phe	His	Ala	Glu			
		755					760					765						
His	Val	Arg	His	Leu	Lys	Asp	Glu	Val	Phe	Ser	Cys	Arg	Arg	Arg	Arg			
	770				775						780							
Asp	Ala	Val	Glu	Ile	Glu	Leu	Leu	Val	Asp	Lys	Pro	Ser	Asp	Thr	Asn			
	785				790					795					800			
Asn	Asn	Asn	Thr	Leu	Ala	Ser	Ser	Asp	Asp	Asp	Val	Val	Val	Asp	Ala			

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Lys	Ala	Glu	Glu	805	Gln	Asp	Gly	Met	Leu	810	Ala	Asp	Asp	Asp	Gly	815	Asp	Thr
Leu	Asn	Ala	Glu	820	Thr	Leu	Ser	Ser	Asn	825	Ser	Leu	Phe	Gln	Ser	830	Leu	Leu
Arg	Ala	Val	Ser	835	Ser	Val	Phe	840	Glu	Pro	Val	Tyr	Thr	Ala	Ile	Pro	Glu	
Ser	850	Asp	Pro	Ser	Ala	Gly	Thr	855	Ala	Lys	Val	Tyr	860	Ser	Phe	Asp	Ala	Tyr
865	Thr	Ser	Thr	Gly	Pro	870	Gly	Ala	Tyr	Pro	Met	875	Pro	Ser	Ile	Ser	Asp	Thr
Pro	Ile	Pro	Gly	885	Asn	Pro	Phe	Tyr	Asn	890	Phe	Arg	Asn	Pro	Ala	895	Ser	Asn
Phe	Pro	Trp	Ser	900	Thr	Val	Phe	Leu	905	Ala	Gly	Gln	Ala	Cys	910	Glu	Gly	Pro
Leu	Pro	Ala	Ser	915	Ala	Pro	Arg	920	Glu	His	Gln	Val	Ile	Val	Met	925	Leu	Arg
Gly	930	Gly	Cys	Ser	Phe	Ser	935	Arg	Lys	Leu	Asp	Asn	Ile	Pro	Ser	Phe	Ser	
945	Pro	His	Asp	Arg	Ala	Leu	Gln	Leu	Val	Val	940	Val	Leu	Asp	Glu	Pro	960	Pro
Pro	Pro	Pro	Pro	950	Pro	Pro	Pro	Ala	Asn	Asp	Arg	Arg	Asp	Val	Thr	Arg	975	
Pro	Leu	Leu	Asp	965	Thr	Glu	Gln	Thr	970	Thr	Pro	Lys	Gly	Met	Lys	Arg	Leu	
His	Gly	Ile	Pro	980	Met	Val	Leu	1000	Val	Arg	Ala	Ala	Arg	Gly	Asp	Tyr	Glu	
1010	Leu	Phe	Gly	985	His	Ala	Ile	1015	Gly	Val	Gly	Met	Arg	Arg	Lys	Tyr	Arg	Val
1025	Glu	Ser	Gln	Gly	1030	Leu	Val	Val	Glu	Asn	Ala	Val	Val	Leu			1040	
				1045						1050								

<210> 80
 <211> 45
 <212> PRT
 <213> Trichoderma reesei

<400> 80
 Met Met Pro Arg His His Ser Ser Gly Phe Ser Asn Gly Tyr Pro Arg
 1 5 10 15
 Ala Asp Thr Phe Glu Ile Ser Pro His Arg Phe Gln Pro Arg Ala Thr
 20 25 30
 Leu Pro Pro His Arg Lys Arg Lys Arg Thr Ala Ile Arg
 35 40 45

<210> 81
 <211> 16
 <212> PRT
 <213> Trichoderma reesei

<400> 81
 Val Gly Ile Ala Val Val Val Ile Leu Val Leu Val Leu Trp Phe Gly
 1 5 10 15

<210> 82
 <211> 407
 <212> PRT
 <213> Trichoderma reesei

<400> 82
 Gln Pro Arg Ser Val Ala Ser Leu Ile Ser Leu Gly Ile Leu Ser Gly
 1 5 10 15
 Tyr Asp Asp Leu Lys Leu Glu Thr Val Arg Tyr Tyr Asp Leu Ser Asn
 20 25 30
 Val Gln Gly Thr Ala Arg Gly Trp Glu Arg Glu Glu Arg Ile Leu Leu

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1

5

10

15

<210> 85

<211> 358

<212> PRT

<213> Trichoderma reesei

<400> 85

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Arg Gly Val Ser Thr Ser Ala Ser Glu Met Gln Ser Phe Tyr Cys Trp
 1      5      10      15
Gly Pro Ala Lys Pro Pro Met Glu Met Ser Pro Asn Glu His Asn Arg
 20      25
Trp Asn Gly His Leu Gln Thr Pro Val Ile Phe Asn His His Ala Pro
 35      40      45
Val Glu Val Asn Ser Ser Thr Ile Glu His Val Asp Leu Asn Pro Ile
 50      55      60
Asn Ser Thr Lys Gln Ala Val Thr Lys Glu Glu Arg Ile Leu Ile Leu
 65      70      75
Thr Pro Leu Lys Asp Ala Ala Pro Tyr Leu Ser Lys Tyr Phe Glu Leu
 85      90      95
Leu Ala Glu Leu Thr Tyr Pro His Arg Leu Ile Asp Leu Ala Phe Leu
100      105      110
Val Ser Asp Ser Thr Asp Asp Thr Leu Ala Val Leu Ala Ser Glu Leu
115      120      125
Asp Arg Ile Gln Lys Arg Pro Asp Gln Ile Pro Phe His Ser Ala Thr
130      135      140
Val Ile Glu Lys Asp Phe Gly Phe Lys Leu Ser Gln Asn Val Glu Glu
145      150      155
Arg His Ser Phe Glu Ala Gln Gly Pro Arg Arg Lys Ala Met Gly Arg
165      170      175
Ala Arg Asn Tyr Leu Leu Tyr Thr Ala Leu Lys Pro Glu His Ser Trp
180      185      190
Val Tyr Trp Arg Asp Val Asp Ile Val Asp Ser Pro Thr Gly Ile Leu
195      200      205
Glu Asp Phe Ile Ala His Asp Arg Asp Ile Leu Val Pro Asn Ile Trp
210      215      220
Phe His Arg Tyr Arg Asp Gly Val Asp Ile Glu Gly Arg Phe Asp Tyr
225      230      235
Asn Ser Trp Val Glu Ser Asp Lys Gly Arg Lys Leu Ala Asn Ser Leu
245      250      255
Asp Lys Asp Val Val Leu Ala Glu Gly Tyr Lys Gln Tyr Asp Thr Gly
260      265      270
Arg Thr Tyr Met Ala Lys Met Gly Asp Trp Arg Glu Asn Lys Asp Val
275      280      285
Glu Leu Glu Leu Asp Gly Ile Gly Gly Val Asn Ile Leu Val Lys Ala
290      295      300
Asp Val His Arg Ser Gly Ile Asn Phe Pro Cys Tyr Ala Phe Glu Asn
305      310      315
Gln Ala Glu Thr Glu Gly Phe Ala Lys Met Ala Lys Arg Ala Gly Tyr
325      330      335
Glu Val Tyr Gly Leu Pro Asn Tyr Val Val Trp His Ile Asp Thr Glu
340      345      350
Glu Lys Gly Gly Asn Ala
355

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<210> 86

<211> 17

<212> PRT

<213> Trichoderma reesei

<400> 86

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Met Ala Arg Pro Met Gly Ser Val Arg Leu Lys Lys Ala Asn Pro Ser
 1      5      10      15
Thr

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colf-seql

<210> 87
 <211> 16
 <212> PRT
 <213> Trichoderma reesei

<400> 87
 Leu Ile Leu Gly Ala Val Leu Cys Ile Phe Ile Ile Ile Phe Leu Val
 1 5 10 15

<210> 88
 <211> 339
 <212> PRT
 <213> Trichoderma reesei

<400> 88
 Ser Pro Ser Ser Pro Ala Ser Ala Ser Arg Leu Ser Ile Val Ser Ala
 1 5 10 15
 Gln His His Leu Ser Pro Pro Thr Ser Pro Tyr Gln Ser Pro Arg Ser
 20 25 30
 Gly Ala Val Gln Gly Pro Pro Pro Val Thr Arg Tyr Asn Leu Asn Lys
 35 40 45
 Val Thr Val Thr Ser Asp Pro Val Arg Asn Gln Glu His Ile Leu Ile
 50 55 60
 Leu Thr Pro Met Ala Arg Phe Tyr Gln Glu Tyr Trp Asp Asn Leu Leu
 65 70 75 80
 Arg Leu Asn Tyr Pro His Glu Leu Ile Thr Leu Gly Phe Ile Leu Pro
 85 90 95
 Lys Thr Lys Glu Gly Asn Gln Ala Thr Ser Met Leu Gln Lys Gln Ile
 100 105 110
 Gln Lys Thr Gln Asn Tyr Gly Pro Glu Lys Asp Arg Phe Lys Ser Ile
 115 120 125
 Ile Ile Leu Arg Gln Asp Phe Asp Pro Ala Val Val Ser Gln Asp Glu
 130 135 140
 Ser Glu Arg His Lys Leu Ala Asn Gln Lys Ala Arg Arg Glu Val Met
 145 150 155 160
 Ala Lys Ala Arg Asn Ser Leu Leu Phe Thr Thr Leu Gly Pro Ser Thr
 165 170 175
 Ser Trp Val Leu Trp Leu Asp Ala Asp Ile Thr Glu Thr Ala Pro Thr
 180 185 190
 Leu Ile Gln Asp Leu Ala Ser His Asp Lys Pro Ile Ile Val Ala Asn
 195 200 205
 Cys Phe Gln Lys Tyr Tyr Asp Pro Glu Ser Lys Lys Met Ala Glu Arg
 210 215 220
 Pro Tyr Asp Phe Asn Ser Trp Gln Asp Ser Glu Thr Ala Leu Lys Met
 225 230 235 240
 Ala Glu Gln Met Gly Pro Asp Asp Ile Leu Glu Gly Tyr Ala Glu
 245 250 255
 Met Ala Thr Tyr Arg Thr Leu Leu Ala Tyr Met Ser Thr Pro Gly Gly
 260 265 270
 Ser Lys Asp Leu Val Val Pro Leu Asp Gly Val Gly Gly Thr Ala Leu
 275 280 285
 Leu Val Lys Ala Asp Val His Arg Asp Gly Ala Met Phe Pro Pro Phe
 290 295 300
 Ala Phe Tyr His Leu Ile Glu Ser Glu Gly Phe Ala Lys Met Ala Lys
 305 310 315 320
 Arg Leu Gly Trp Gln Pro Tyr Gly Leu Pro Asn Tyr Lys Val Tyr His
 325 330 335
 Tyr Asn Glu

<210> 89
 <211> 33
 <212> PRT
 <213> Trichoderma reesei

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<400> 89

Met His Phe Ala Tyr Pro Ser Arg Lys Ser Ser Asn Pro Pro Pro Phe
 1 5 10 15
 Arg Pro Arg Ser Thr Arg Leu Pro Gly Leu Arg Arg Ser Arg Ile Lys
 20 25 30
 Thr

<210> 90

<211> 15

<212> PRT

<213> Trichoderma reesei

<400> 90

Ile Gly Ile Val Leu Phe Leu Val Leu Ala Thr Leu Trp Phe Phe
 1 5 10 15

<210> 91

<211> 262

<212> PRT

<213> Trichoderma reesei

<400> 91

Ser Asn Pro Arg Val Pro Arg Pro Asp Pro Glu Arg Val Pro Ser Gly
 1 5 10 15
 Arg Pro Pro Val Val Leu Val Thr Val Ile Asp Pro Thr Gln Tyr Pro
 20 25 30
 Asn Ala Tyr Leu Lys Thr Ile Lys Glu Asn Arg Glu Gln Tyr Ala Ala
 35 40 45
 Lys His Gly Tyr Glu Ala Phe Ile Val Lys Ala Tyr Asp Tyr Asp Thr
 50 55 60
 Gln Gly Ala Pro Gln Ser Trp Ser Lys Leu Met Ala Met Arg His Ala
 65 70 75 80
 Leu Thr Lys Phe Pro Glu Cys Arg Phe Val Trp Tyr Leu Asp Gln Asp
 85 90 95
 Ala Tyr Ile Met Asp Met Ser Lys Ser Leu Glu Glu Gln Leu Leu Asn
 100 105 110
 Arg Gln Lys Leu Glu Ser Leu Met Ile Lys Asn Tyr Pro Val Val Pro
 115 120 125
 Pro Asp Ser Ile Ile Lys Thr Phe Ser His Leu Arg Pro Asp Glu Val
 130 135 140
 Asp Leu Ile Val Ser Gln Asp Ser Ser Gly Leu Val Ala Gly Ser Val
 145 150 155 160
 Val Val Arg Asn Ser Gln Trp Ser Lys Phe Leu Leu Glu Thr Trp Met
 165 170 175
 Asp Pro Leu Tyr Arg Ser Tyr Asn Phe Gln Lys Ala Glu Arg His Ala
 180 185 190
 Leu Glu His Ile Val Gln Trp His Pro Thr Ile Leu Ser Lys Leu Ala
 195 200 205
 Leu Val Pro Gln Arg Thr Leu Gly Pro Tyr Thr Arg Thr Asp Gln Gly
 210 215 220
 Asp Ala Tyr Gln Asp Gly Asp Phe Val Val Met Phe Thr Gly Cys Thr
 225 230 235 240
 Lys Ser Gly Glu Gln Ser Cys Glu Thr Val Ser Ala Ser Tyr Tyr Gln
 245 250 255
 Lys Trp Ser Ser Ser Leu
 260

<210> 92

<211> 119

<212> PRT

<213> Trichoderma reesei

<400> 92

Met Ser Leu Ser Arg Ser Pro Ser Pro Val Pro Gly Gly Gly Trp Ser

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1	Ser	Pro	Gly	Leu	5	Asn	Ile	Asn	Ser	Gly	10	Arg	Ser	Ser	Pro	Ser	15	Asn	Ala
				20						25						30			
	Ala	Gly	Ser	Ser	Val	Ser	Trp	Glu	Ser	Ala	Lys	Met	Arg	Lys	Gln	Gly			
			35					40						45					
	Ala	Asn	Gly	Tyr	Pro	Ser	Phe	Ser	Thr	Gln	Asn	Gln	Gly	Phe	Phe	Thr			
		50					55					60							
	Arg	His	Met	Arg	Arg	Ile	Ser	Ser	Ser	Leu	Pro	Arg	Phe	Ala	Ala	Gly			
65					70						75					80			
	Pro	Gly	Asn	Thr	Tyr	Ala	Glu	Arg	Glu	Lys	Tyr	Glu	Arg	Gly	Gly	His			
				85						90					95				
	Ser	Pro	His	Ala	Gly	Gly	Gly	Arg	Leu	Arg	Ala	Phe	Leu	Ala	Arg	Ile			
			100						105					110					
	Gly	Arg	Arg	Leu	Lys	Trp	Arg												
			115																

<210> 93
 <211> 16
 <212> PRT
 <213> Trichoderma reesei

<400> 93
 Ile Leu Leu Pro Leu Ile Ile Ile Cys Thr Ile Val Ala Tyr Tyr Gly
 1 5 10 15

<210> 94
 <211> 324
 <212> PRT
 <213> Trichoderma reesei

<400> 94
 Thr His Glu Ala Pro Gly Phe Val His Trp Trp Arg Arg Ile Ser Met
 1 5 10 15
 Gly Gly Gly Gly Glu Lys Phe Val Ile Ile Leu Gly Ala Asn Val Gly
 20 25 30
 Gly Gly Val Met Glu Trp Lys Gly Ala Arg Glu Trp Ala Ile Glu Arg
 35 40 45
 Asp Ser Val Arg Asn Lys Arg Lys Tyr Ala Thr Arg Trp Gly Tyr Asp
 50 55 60
 Leu Glu Ile Val Asp Met Lys Thr Lys Lys Arg Tyr Ala His Glu Trp
 65 70 75 80
 Arg Glu Ser Trp Glu Lys Val Asp Phe Ile Arg Ala Ala Met Arg Lys
 85 90 95
 Tyr Pro Lys Ala Glu Trp Phe Trp Trp Leu Asp Leu Asn Thr Tyr Val
 100 105 110
 Met Glu Pro Ser Tyr Ser Leu Gln Arg His Leu Phe Asn His Leu Asp
 115 120 125
 Arg His Val Tyr Arg Asp Ile Asn Val Phe Asn Pro Leu Asn Ile Thr
 130 135 140
 His Pro Pro Thr Glu Glu Tyr Leu Asp Ala Glu Ala Arg Ser Pro Val
 145 150 155 160
 Gly Asp Gly Asn Ile Asn Ser Val Asn Leu Met Leu Thr Gln Asp Cys
 165 170 175
 Ser Gly Phe Asn Leu Gly Ser Phe Phe Ile Arg Arg Ser Ala Trp Thr
 180 185 190
 Glu Gln Leu Leu Asp Ile Trp Trp Asp Pro Val Leu Tyr Glu Gln Lys
 195 200 205
 His Met Glu Trp Glu His Lys Glu Gln Asp Ala Leu Glu Gln Leu Tyr
 210 215 220
 Arg Thr Gln Pro Trp Ile Arg Gln His Thr Gly Phe Leu Pro Gln Arg
 225 230 235 240
 Leu Ile Asn Ser Phe Pro Pro Ala Ala Cys Ala Asp Glu Ser Gly Leu
 245 250 255
 Asn Asn Thr Arg Ile His Tyr Asn Glu Lys Asp Arg Asp Phe Val Val
 260 265 270
 Asn Met Ala Gly Cys Glu Trp Gly Arg Asp Cys Trp Gly Glu Met Tyr

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His	Tyr	275	Arg	Glu	Phe	Ser	Tyr	280	Trp	Leu	Asn	Arg	Asn	285	Pro	Trp	Glu	Leu
	290						295						300					
Phe	Lys	Glu	Glu	Ile	Val	Ala	Val	Ile	Trp	Tyr	Lys	Leu	Thr	Gly	Gln			
305					310					315					320			
Arg	Val	Lys	Leu															

<210> 95
 <211> 863
 <212> PRT
 <213> Homo sapiens

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val			
1				5					10					15				
Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	Ser	Ser	Asn	Gly	Arg	Gln	Arg			
		20						25					30					
Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Glu	Pro	Ala	Arg			
		35					40					45						
Gly	Ala	Gly	Gly	Arg	Gly	Gly	Asp	His	Pro	Ser	Val	Ala	Val	Gly	Ile			
	50				55						60							
Arg	Arg	Val	Ser	Asn	Val	Ser	Ala	Ala	Ser	Leu	Val	Pro	Ala	Val	Pro			
65				70						75					80			
Gln	Pro	Glu	Ala	Asp	Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr			
			85						90					95				
Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Ala	Gly	Thr			
			100					105					110					
Trp	Ala	Pro	Arg	Glu	Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg	Pro			
		115					120					125						
Glu	Tyr	Leu	Arg	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile			
	130					135					140							
Asp	Asn	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu	Ile			
145					150					155					160			
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asn	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe			
			165						170					175				
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser	Asp			
			180					185					190					
Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Pro	Lys	Asn	Ala	Ala	Leu	Lys	Leu			
		195					200					205						
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu			
	210					215					220							
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe			
225					230					235					240			
Val	Trp	Glu	Arg	Val	Lys	Ile	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Ile	Leu			
				245					250					255				
Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe			
			260					265					270					
Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Gln	Glu	Cys	Pro	Glu	Cys	Asp	Val			
		275					280					285						
Leu	Ser	Leu	Gly	Thr	Tyr	Ser	Ala	Ser	Arg	Ser	Phe	Tyr	Gly	Met	Ala			
	290					295					300							
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly			
305					310					315					320			
Leu	Ala	Leu	Thr	Arg	Asn	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp			
				325					330					335				
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr			
			340					345					350					
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln			
			355				360					365						
Ile	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys			
	370					375					380							
Thr	Cys	Arg	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn			
385					390					395					400			
Asn	Asn	Lys	Gln	Tyr	Met	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys			
				405					410					415				
Phe	Thr	Val	Val	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly			

eofl-seql

Asp	Ile	Arg	420	Asp	His	Glu	Leu	Cys	425	Lys	Ser	Tyr	Arg	Arg	430	Leu	Gln	Thr
		435						440						445				
Arg	Pro	Ala	Pro	Gly	Arg	Pro	Pro	Ser	Val	Ser	Ala	Leu	Asp	Gly	Asp			
	450					455					460							
Pro	Ala	Ser	Leu	Thr	Arg	Glu	Val	Ile	Arg	Leu	Ala	Gln	Asp	Ala	Glu			
465					470					475					480			
Val	Glu	Leu	Glu	Arg	Gln	Arg	Gly	Leu	Leu	Gln	Gln	Ile	Gly	Asp	Ala			
				485					490					495				
Leu	Ser	Ser	Gln	Arg	Gly	Arg	Val	Pro	Thr	Ala	Ala	Pro	Pro	Ala	Gln			
			500					505					510					
Pro	Arg	Val	Pro	Val	Thr	Pro	Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val			
	515						520					525						
Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu			
	530					535					540							
His	Tyr	Arg	Pro	Ser	Ala	Glu	Leu	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp			
545					550					555					560			
Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Ala	Ile	Ala	Ser	Tyr	Gly	Ser	Ala			
				565					570					575				
Val	Thr	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro			
			580					585					590					
Asp	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg			
	595						600					605						
Trp	Ala	Leu	Gly	Gln	Val	Phe	Arg	Gln	Phe	Arg	Phe	Pro	Ala	Ala	Val			
	610					615					620							
Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe			
625					630					635					640			
Arg	Ala	Thr	Tyr	Pro	Leu	Leu	Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val			
				645					650					655				
Ser	Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ala	Ser	Arg			
			660					665				670						
Pro	Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu			
	675						680					685						
Leu	Leu	Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala			
	690					695					700							
Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala			
705					710					715					720			
Cys	Ile	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly			
				725					730					735				
Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu			
			740					745					750					
Asn	Gln	Gln	Phe	Val	His	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln			
	755						760					765						
Arg	Glu	Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro			
	770					775					780							
Gln	Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Arg	Lys	Glu	Leu	Gly			
785					790					795					800			
Glu	Val	Arg	Val	Gln	Tyr	Thr	Gly	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala			
				805					810					815				
Lys	Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala			
			820					825					830					
Gly	Tyr	Arg	Gly	Ile	Val	Thr	Phe	Gln	Phe	Arg	Gly	Arg	Arg	Val	His			
	835						840					845						
Leu	Ala	Pro	Pro	Pro	Thr	Trp	Glu	Gly	Tyr	Asp	Pro	Ser	Trp	Asn				
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<210> 96
 <211> 2592
 <212> DNA
 <213> Homo sapiens

<400> 96
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 ggctttgttc tctggtccag caacgggtcgc cagcgtaaga acgaggccct ggcgccctccc 120
 ctcttggtgac ccgaaccggc cagaggcgca ggtggcaggg gaggggatca cccctcgggtc 180
 gctgtcggca tccgccgcgt cagcaatgtg tccgccgcct ctctggtccc ggcggttccg 240
 cagcctgagg cagacaacct cacgctgcgc taccgatcac tcgtgtatca acttaacttc 300

eolf-seql

gaccagactc	tgcggaacgt	cgacaaggcc	ggaacctggg	ctccgcgtga	gttggtcctc	360
gtcgttcagg	tcgacaacag	gccccagtag	ctccgcctcc	tgctggattc	gcttcgaaag	420
gcccagggca	tcgacaacgt	cctgggtgatt	ttcagccatg	acttttggtc	cacagagatc	480
aatcagctca	ttgcgggtgt	caacttttgc	ccggtcttgc	aagttttctt	ccctttctct	540
atccaactct	accccaacga	gttcccgggc	agtgaccccc	gcgactgtcc	tcgggatctg	600
ccaaaaaacg	ccgctctcaa	gctgggctgc	atcaacgccg	aataccccga	cagctttggc	660
cactatcgcg	aggccaagtt	ctcgcagacg	aagcaccact	ggtggtggaa	gctccatttt	720
gtctgggagc	gagtgaagat	ccttcgtgat	tacgcaggac	tcattctgtt	cttgggaagag	780
gaccactacc	tggccccgga	cttctaccac	gtctttaaga	agatgtggaa	gctcaagcag	840
caggaatgcc	ccgagtgcga	cgttctgtcc	cttggcacct	atagcgcgtc	ccgctcgttc	900
tacggtatgg	ctgacaaggt	cgatgtgaaa	acctggaagt	caactgagca	caatatgggc	960
ctcgccctga	cgaggaacgc	ctaccagaaa	ctcatcgagt	gtaccgacac	cttctgcacg	1020
tacgacgact	ataactggga	ttggacactg	cagtacttga	ctgtcagctg	cctccctaag	1080
ttttggaagg	tccttgttcc	ccagatcccg	agaatttttc	atgctggcga	ctgcgggatg	1140
caccacaaga	aaacctgtcg	cccatccacg	cagcttgccc	aaatcgagtc	gctcctgaac	1200
aacaacaagc	agtacatgtt	ccccgagaca	ctgaccatta	gcgagaagtt	tacggtcgtg	1260
gcgatctccc	cgctctgaaa	gaatggcggc	tggggtgaca	tccgcgatca	cgagctgtgc	1320
aagtcttacc	gccggctcca	gacgcgccc	gcacctggca	ggccaccctc	agtcagcgct	1380
ctcgatggcg	accccgccag	cctcaccggg	gaagtgatcc	gcctggccca	agacgccgag	1440
gtggagctgg	agcggcagcg	tgggctgctg	cagcagatcg	gggatgccct	gtcgaggatg	1500
cgggggaggg	tgcccaccgc	cgcccctccc	gcccagccgc	gtgtgcctgt	gaccccccg	1560
ccggcggtga	ttcccatcct	ggtcatcgcc	tgtgaccgca	gcactgttcg	gcgctgcctg	1620
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cggcagcccc	acctgagcag	cattgcgggtg	ccgcccggacc	accgcaagtt	ccagggctac	1800
tacaagatcg	cgcgccacta	ccgctgggcg	ctggggcagg	tcttccggca	gtttcgcttc	1860
cccgcgcgcy	tgggtggtgga	ggatgacctg	gaggtggccc	cggacttctt	cgagtacttt	1920
cgggccacct	atccgctgct	gaaggccgac	ccctccctgt	ggtgcgtctc	ggcctggaat	1980
gacaacggca	aggagcagat	ggtggacgcc	agcaggcctg	agctgctcta	ccgcaccgac	2040
tttttccctg	gcctgggctg	gctgctgttg	gccgagctct	gggctgagct	ggagcccaag	2100
tggccaaagg	ccttctggga	cgactggatg	cgccggccgg	agcagcggca	ggggcggggc	2160
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cagttctttg	accagcacct	caagttcatc	aagctgaacc	agcagtttgt	gcacttcacc	2280
cagctggacc	tgtcttacct	gcagcgggag	gcctatgacc	gagatttctc	cgcccgcgtc	2340
tacggtgctc	cccagctgca	ggtggagaaa	gtgaggacca	atgaccggaa	ggagctgggg	2400
gaggtgcggg	tgcagtacac	gggcagggac	agcttcaagg	ctttcgccaa	ggctctgggt	2460
gtcatggatg	acctcaagtc	gggggttccg	agagctggct	accggggcat	tgtcaccttc	2520
cagttccggg	gccgccgtgt	ccacctggcg	ccccaccga	cgtgggaggg	ctatgatccc	2580
agctggaatt	ag					2592

<210> 97

<211> 1263

<212> DNA

<213> Trichoderma reesei

<400> 97

atggcgtcac	tcatcaaaac	tgccgtggac	attgccaaac	gccgccatgc	gctgtccaga	60
tatgtcatct	ttgggctctg	gcttgcggat	gcgggtgctgt	gcgggctgat	tatctggaaa	120
gtgccttata	cggaaatcga	ctgggtcgcc	tacatggagc	aagtcaccca	gttcgctcac	180
ggagagcgag	actaccccaa	gatggagggc	ggcacagggc	ccctggtgta	tcccgcggcc	240
catgtgtaca	tctacacagg	gctctactac	ctgacgaaca	agggcaccga	catcctgctg	300
gcgcagcagc	tctttgccgt	gctctacatg	gctactctgg	cggtcgtcat	gacatgctac	360
tccaaggcca	aggtcccggc	gtacatcttc	ccgcttctca	tcctctccaa	aagacttcac	420
agcgtcttcg	tcctgagatg	cttcaacgac	tgccttcgcc	ccttcttccg	ctggctctgc	480
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ggcgtcaaaa	tgtcgtgctg	actggttctc	cccgcggtgg	tcacgtcctt	ctacctcggc	600
cgcggttca	agggcgccct	gcggctgctc	tggctcatgg	tgcaggtcca	gctcctctc	660
gccataccct	tcatcacgac	aaattggcgc	ggctacctcg	gccgtgcatt	cgagctctcg	720
aggcagttca	agtttgaatg	gacagtcaat	tggcgcgatg	tgggcgagga	tctgttcctc	780
agccggggct	tctctatcac	gctactggca	tttcacgcc	tcttctctct	cgcttttatc	840
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cgatttcagat	gcgccctttac	cgagcaggaa	gagcgcgcc	tctccaaccg	cgctcgtcac	960
cccggctatg	tcatgtccac	catcttgctg	gccaacgtgg	tgggactgct	gtttgcccg	1020
tctctgcact	accagttcta	tgcatactct	gcgtgggcga	ccccctatct	cctgtggacg	1080
gcctgcccc	atcttttggg	ggtggcccc	ctctgggcgg	cgcaagaatg	ggcctggaac	1140
gtcttcccca	gcacgcctct	tagctcgagc	gtcgtggtga	gcgtgctggc	cgtgacgggt	1200
gcatggcggt	ttgcaggttc	aaatccgcag	ccacgtgaaa	catcgaagcc	gaagcagcac	1260
taa						1263

eolf-seql

<210> 98
 <211> 420
 <212> PRT
 <213> Trichoderma reesei

<400> 98
 Met Ala Ser Leu Ile Lys Thr Ala Val Asp Ile Ala Asn Gly Arg His
 1 5 10 15
 Ala Leu Ser Arg Tyr Val Ile Phe Gly Leu Trp Leu Ala Asp Ala Val
 20 25 30
 Leu Cys Gly Leu Ile Ile Trp Lys Val Pro Tyr Thr Glu Ile Asp Trp
 35 40 45
 Val Ala Tyr Met Glu Gln Val Thr Gln Phe Val His Gly Glu Arg Asp
 50 55 60
 Tyr Pro Lys Met Glu Gly Gly Thr Gly Pro Leu Val Tyr Pro Ala Ala
 65 70 75 80
 His Val Tyr Ile Tyr Thr Gly Leu Tyr Tyr Leu Thr Asn Lys Gly Thr
 85 90 95
 Asp Ile Leu Leu Ala Gln Gln Leu Phe Ala Val Leu Tyr Met Ala Thr
 100 105 110
 Leu Ala Val Val Met Thr Cys Tyr Ser Lys Ala Lys Val Pro Pro Tyr
 115 120 125
 Ile Phe Pro Leu Leu Ile Leu Ser Lys Arg Leu His Ser Val Phe Val
 130 135 140
 Leu Arg Cys Phe Asn Asp Cys Phe Ala Ala Phe Phe Leu Trp Leu Cys
 145 150 155 160
 Ile Phe Phe Phe Gln Arg Arg Glu Trp Thr Ile Gly Ala Leu Ala Tyr
 165 170 175
 Ser Ile Gly Leu Gly Val Lys Met Ser Leu Leu Leu Val Leu Pro Ala
 180 185 190
 Val Val Ile Val Leu Tyr Leu Gly Arg Gly Phe Lys Gly Ala Leu Arg
 195 200 205
 Leu Leu Trp Leu Met Val Gln Val Gln Leu Leu Leu Ala Ile Pro Phe
 210 215 220
 Ile Thr Thr Asn Trp Arg Gly Tyr Leu Gly Arg Ala Phe Glu Leu Ser
 225 230 235 240
 Arg Gln Phe Lys Phe Glu Trp Thr Val Asn Trp Arg Met Leu Gly Glu
 245 250 255
 Asp Leu Phe Leu Ser Arg Gly Phe Ser Ile Thr Leu Leu Ala Phe His
 260 265 270
 Ala Ile Phe Leu Leu Ala Phe Ile Leu Gly Arg Trp Leu Lys Ile Arg
 275 280 285
 Glu Arg Thr Val Leu Gly Met Ile Pro Tyr Val Ile Arg Phe Arg Ser
 290 295 300
 Pro Phe Thr Glu Gln Glu Glu Arg Ala Ile Ser Asn Arg Val Val Thr
 305 310 315 320
 Pro Gly Tyr Val Met Ser Thr Ile Leu Ser Ala Asn Val Val Gly Leu
 325 330 335
 Leu Phe Ala Arg Ser Leu His Tyr Gln Phe Tyr Ala Tyr Leu Ala Trp
 340 345 350
 Ala Thr Pro Tyr Leu Leu Trp Thr Ala Cys Pro Asn Leu Leu Val Val
 355 360 365
 Ala Pro Leu Trp Ala Ala Gln Glu Trp Ala Trp Asn Val Phe Pro Ser
 370 375 380
 Thr Pro Leu Ser Ser Ser Val Val Val Ser Val Leu Ala Val Thr Val
 385 390 395 400
 Ala Met Ala Phe Ala Gly Ser Asn Pro Gln Pro Arg Glu Thr Ser Lys
 405 410 415
 Pro Lys Gln His
 420

<210> 99
 <211> 21
 <212> DNA
 <213> Artificial Sequence

eolf-seql

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<220>
<223> Synthesized Construct

<400> 99
gcaaattggca ttctgacatc c                21

<210> 100
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 100
gactggttcc aattgacaag c                21

<210> 101
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 101
cagtggtagc ctaattccag ctaggatcat agccctccca cg        42

<210> 102
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 102
cggaccaccg caagttcc                18

<210> 103
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 103
atgcggaatt ctgcatcatc atcatcatca tcgccagcgt aagaacgagg ccct        54

<210> 104
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 104
cctttctcta tccaactcta cc                22

<210> 105
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

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eolf-seql

<400> 105
ggaacttgcg gtggtccg 18

<210> 106
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 106
ccgccggctc cagggaggtg ggggcagtgg aggtggcggc agtgggaggg tgcccaccgc 60
cgcccc 66

<210> 107
<211> 66
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 107
gcggtgggca ccctcccact gccgccacct ccaactgcccc cacctccctg gagccggcgg 60
taagac 66

<210> 108
<211> 65
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 108
aggtgggggc agtggaggtg gcggcagtgg cggcgggtgga agtgggaggg tgcccaccgc 60
cgccc 65

<210> 109
<211> 64
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 109
cggtgggcac cctcccactt ccaccgccgc cactgccgcc acctccactg cccccacctc 60
cctg 64

<210> 110
<211> 65
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

<400> 110
gtttccgccc ggaggggttc cgccgctagg gttgccggtg ctctggagcc ggcggtaaga 60
cttgc 65

<210> 111
<211> 66
<212> DNA
<213> Artificial Sequence

eolf-seql

<220>

<223> Synthesized Construct

<400> 111

gcaaccctcc cggcggaaac ccgcctggca gcaccgggag ggtgccacc gccgccctc 60
ccgcc 66

<210> 112

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 112

ccgcctccag gaacagtggc gctggcgggtg gccgtcggg cggagctctg gagccggcgg 60
taagacttgc 70

<210> 113

<211> 71

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 113

cgccactgtt cctggaggcg gtagcggccc caccagcggg agggtgccca ccgccgcccc 60
tcccgccag c 71

<210> 114

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 114

cattagcgag aagtttacgg 20

<210> 115

<211> 106

<212> PRT

<213> Trichoderma reesei

<400> 115

Met	Ala	Ser	Thr	Asn	Ala	Arg	Tyr	Val	Arg	Tyr	Leu	Leu	Ile	Ala	Phe
1				5					10					15	
Phe	Thr	Ile	Leu	Val	Phe	Tyr	Phe	Val	Ser	Asn	Ser	Lys	Tyr	Glu	Gly
		20						25					30		
Val	Asp	Leu	Asn	Lys	Gly	Thr	Phe	Thr	Ala	Pro	Asp	Ser	Thr	Lys	Thr
		35					40					45			
Thr	Pro	Lys	Pro	Pro	Ala	Thr	Gly	Asp	Ala	Lys	Asp	Phe	Pro	Leu	Ala
		50				55					60				
Leu	Thr	Pro	Asn	Asp	Pro	Gly	Phe	Asn	Asp	Leu	Val	Gly	Ile	Ala	Pro
65					70				75					80	
Gly	Pro	Arg	Met	Asn	Ala	Thr	Phe	Val	Thr	Leu	Ala	Arg	Asn	Ser	Asp
				85					90					95	
Val	Trp	Asp	Ile	Ala	Arg	Ser	Ile	Arg	Gln						
			100					105							

<210> 116

<211> 83

<212> PRT

eolf-seql

<213> Trichoderma reesei

<400> 116

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Met Ala Ser Thr Asn Ala Arg Tyr Val Arg Tyr Leu Leu Ile Ala Phe
 1          5          10          15
Phe Thr Ile Leu Val Phe Tyr Phe Val Ser Asn Ser Lys Tyr Glu Gly
          20          25          30
Val Asp Leu Asn Lys Gly Thr Phe Thr Ala Pro Asp Ser Thr Lys Thr
          35          40          45
Thr Pro Lys Pro Pro Ala Thr Gly Asp Ala Lys Asp Phe Pro Leu Ala
          50          55          60
Leu Thr Pro Asn Asp Pro Gly Phe Asn Asp Leu Val Gly Ile Ala Pro
65          70          75          80
Gly Pro Arg

```

<210> 117

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 117

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Asp Tyr Lys Asp Asp Asp Asp Lys
 1          5

```

<210> 118

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 118

```

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
 1          5          10          15

```

<210> 119

<211> 824

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 119

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Met Arg Phe Arg Ile Tyr Lys Arg Lys Val Leu Ile Leu Thr Leu Val
 1          5          10          15
Val Ala Ala Cys Gly Phe Val Leu Trp Ser Ser Asn Gly Arg Gln Arg
          20          25          30
Lys Asn Glu Ala Leu Ala Pro Pro Leu Leu Asp Ala Glu Pro Ala Arg
          35          40          45
Gly Ala Gly Gly Arg Gly Gly Asp His Pro Ser Val Ala Val Gly Ile
          50          55          60
Arg Arg Val Ser Asn Val Ser Ala Ala Ser Leu Val Pro Ala Val Pro
65          70          75          80
Gln Pro Glu Ala Asp Asn Leu Thr Leu Arg Tyr Arg Ser Leu Val Tyr
          85          90          95
Gln Leu Asn Phe Asp Gln Thr Leu Arg Asn Val Asp Lys Ala Gly Thr
          100          105          110
Trp Ala Pro Arg Glu Leu Val Leu Val Gln Val His Asn Arg Pro
115          120          125

```

eolf-seql

Glu	Tyr	Leu	Arg	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile
130	130					135				140					
Asp	Asn	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu	Ile
145					150					155					160
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asn	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe
				165					170					175	
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser	Asp
			180					185					190		
Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Pro	Lys	Asn	Ala	Ala	Leu	Lys	Leu
		195					200				205				
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu
	210					215					220				
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe
225					230					235					240
Val	Trp	Glu	Arg	Val	Lys	Ile	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Ile	Leu
				245					250					255	
Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe
			260					265					270		
Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Glu	Cys	Pro	Glu	Cys	Asp	Val	
		275					280				285				
Leu	Ser	Leu	Gly	Thr	Tyr	Ser	Ala	Ser	Arg	Ser	Phe	Tyr	Gly	Met	Ala
	290					295					300				
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly
305					310					315					320
Leu	Ala	Leu	Thr	Arg	Asn	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp
				325					330					335	
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr
			340					345					350		
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln
		355					360					365			
Ile	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys
	370					375					380				
Thr	Cys	Arg	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn
385					390					395					400
Asn	Asn	Lys	Gln	Tyr	Met	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys
				405					410					415	
Phe	Thr	Val	Val	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly
			420					425					430		
Asp	Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln	Gly
		435					440					445			
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Arg
	450					455					460				
Val	Pro	Thr	Ala	Ala	Pro	Pro	Ala	Gln	Pro	Arg	Val	Pro	Val	Thr	Pro
465					470					475					480
Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	Ile	Ala	Cys	Asp	Arg	Ser	Thr
				485					490					495	
Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	His	Tyr	Arg	Pro	Ser	Ala	Glu
			500					505					510		
Leu	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys	Gly	His	Glu	Glu	Thr	Ala
		515					520					525			
Gln	Ala	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	Val	Thr	His	Ile	Arg	Gln	Pro
	530					535					540				
Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro	Asp	His	Arg	Lys	Phe	Gln	Gly
545					550					555					560
Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	Trp	Ala	Leu	Gly	Gln	Val	Phe
				565					570					575	
Arg	Gln	Phe	Arg	Phe	Pro	Ala	Ala	Val	Val	Val	Glu	Asp	Asp	Leu	Glu
			580					585					590		
Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Arg	Ala	Thr	Tyr	Pro	Leu	Leu
		595					600					605			
Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	Ser	Ala	Trp	Asn	Asp	Asn	Gly
	610					615					620				
Lys	Glu	Gln	Met	Val	Asp	Ala	Ser	Arg	Pro	Glu	Leu	Leu	Tyr	Arg	Thr
625					630					635					640
Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	Leu	Ala	Glu	Leu	Trp	Ala	
				645					650					655	
Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	Phe	Trp	Asp	Asp	Trp	Met	Arg
			660					665					670		

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Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala	Cys	Ile	Arg	Pro	Glu	Ile	Ser
		675					680					685			
Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	Val	Ser	His	Gly	Gln	Phe	Phe
	690					695					700				
Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	Asn	Gln	Gln	Phe	Val	His	Phe
	705				710					715					720
Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln	Arg	Glu	Ala	Tyr	Asp	Arg	Asp
				725					730					735	
Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro	Gln	Leu	Gln	Val	Glu	Lys	Val
			740					745					750		
Arg	Thr	Asn	Asp	Arg	Lys	Glu	Leu	Gly	Glu	Val	Arg	Val	Gln	Tyr	Thr
		755					760					765			
Gly	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala	Lys	Ala	Leu	Gly	Val	Met	Asp
	770					775					780				
Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala	Gly	Tyr	Arg	Gly	Ile	Val	Thr
	785				790					795					800
Phe	Gln	Phe	Arg	Gly	Arg	Arg	Val	His	Leu	Ala	Pro	Pro	Pro	Thr	Trp
				805					810					815	
Glu	Gly	Tyr	Asp	Pro	Ser	Trp	Asn								
			820												

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 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized Construct

<400> 120
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
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<210> 121
 <211> 819
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthesized Construct

<400> 121

Met	Arg	Phe	Arg	Ile	Tyr	Lys	Arg	Lys	Val	Leu	Ile	Leu	Thr	Leu	Val
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Val	Ala	Ala	Cys	Gly	Phe	Val	Leu	Trp	Ser	Ser	Asn	Gly	Arg	Gln	Arg
			20					25				30			
Lys	Asn	Glu	Ala	Leu	Ala	Pro	Pro	Leu	Leu	Asp	Ala	Glu	Pro	Ala	Arg
		35				40					45				
Gly	Ala	Gly	Gly	Arg	Gly	Gly	Asp	His	Pro	Ser	Val	Ala	Val	Gly	Ile
	50				55					60					
Arg	Arg	Val	Ser	Asn	Val	Ser	Ala	Ala	Ser	Leu	Val	Pro	Ala	Val	Pro
	65			70					75					80	
Gln	Pro	Glu	Ala	Asp	Asn	Leu	Thr	Leu	Arg	Tyr	Arg	Ser	Leu	Val	Tyr
				85					90				95		
Gln	Leu	Asn	Phe	Asp	Gln	Thr	Leu	Arg	Asn	Val	Asp	Lys	Ala	Gly	Thr
			100					105					110		
Trp	Ala	Pro	Arg	Glu	Leu	Val	Leu	Val	Val	Gln	Val	His	Asn	Arg	Pro
		115					120					125			
Glu	Tyr	Leu	Arg	Leu	Leu	Leu	Asp	Ser	Leu	Arg	Lys	Ala	Gln	Gly	Ile
	130					135					140				
Asp	Asn	Val	Leu	Val	Ile	Phe	Ser	His	Asp	Phe	Trp	Ser	Thr	Glu	Ile
	145				150				155					160	
Asn	Gln	Leu	Ile	Ala	Gly	Val	Asn	Phe	Cys	Pro	Val	Leu	Gln	Val	Phe
				165					170					175	
Phe	Pro	Phe	Ser	Ile	Gln	Leu	Tyr	Pro	Asn	Glu	Phe	Pro	Gly	Ser	Asp
			180					185					190		

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Pro	Arg	Asp	Cys	Pro	Arg	Asp	Leu	Pro	Lys	Asn	Ala	Ala	Leu	Lys	Leu
		195					200					205			
Gly	Cys	Ile	Asn	Ala	Glu	Tyr	Pro	Asp	Ser	Phe	Gly	His	Tyr	Arg	Glu
	210					215					220				
Ala	Lys	Phe	Ser	Gln	Thr	Lys	His	His	Trp	Trp	Trp	Lys	Leu	His	Phe
225					230					235					240
Val	Trp	Glu	Arg	Val	Lys	Ile	Leu	Arg	Asp	Tyr	Ala	Gly	Leu	Ile	Leu
				245					250					255	
Phe	Leu	Glu	Glu	Asp	His	Tyr	Leu	Ala	Pro	Asp	Phe	Tyr	His	Val	Phe
			260					265					270		
Lys	Lys	Met	Trp	Lys	Leu	Lys	Gln	Gln	Glu	Cys	Pro	Glu	Cys	Asp	Val
		275					280					285			
Leu	Ser	Leu	Gly	Thr	Tyr	Ser	Ala	Ser	Arg	Ser	Phe	Tyr	Gly	Met	Ala
	290					295					300				
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly
305					310					315					320
Leu	Ala	Leu	Thr	Arg	Asn	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp
				325					330					335	
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr
			340					345					350		
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln
		355					360					365			
Ile	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys
	370					375					380				
Thr	Cys	Arg	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn
385					390					395					400
Asn	Asn	Lys	Gln	Tyr	Met	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys
				405					410					415	
Phe	Thr	Val	Val	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly
			420					425					430		
Asp	Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln	Gly
		435					440					445			
Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Arg	Val	Pro	Thr	Ala	Ala
	450					455					460				
Pro	Pro	Ala	Gln	Pro	Arg	Val	Pro	Val	Thr	Pro	Ala	Pro	Ala	Val	Ile
465					470					475					480
Pro	Ile	Leu	Val	Ile	Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu
				485					490					495	
Asp	Lys	Leu	Leu	His	Tyr	Arg	Pro	Ser	Ala	Glu	Leu	Phe	Pro	Ile	Ile
			500					505					510		
Val	Ser	Gln	Asp	Cys	Gly	His	Glu	Glu	Thr	Ala	Gln	Ala	Ile	Ala	Ser
		515					520					525			
Tyr	Gly	Ser	Ala	Val	Thr	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile
	530					535					540				
Ala	Val	Pro	Pro	Asp	His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala
545					550					555					560
Arg	His	Tyr	Arg	Trp	Ala	Leu	Gly	Gln	Val	Phe	Arg	Gln	Phe	Arg	Phe
				565					570					575	
Pro	Ala	Ala	Val	Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	
			580				585					590			
Phe	Glu	Tyr	Phe	Arg	Ala	Thr	Tyr	Pro	Leu	Leu	Lys	Ala	Asp	Pro	Ser
		595					600					605			
Leu	Trp	Cys	Val	Ser	Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val
	610					615					620				
Asp	Ala	Ser	Arg	Pro	Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly
625					630					635					640
Leu	Gly	Trp	Leu	Leu	Leu	Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys
				645					650					655	
Trp	Pro	Lys	Ala	Phe	Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg
			660					665					670		
Gln	Gly	Arg	Ala	Cys	Ile	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe
		675					680					685			
Gly	Arg	Lys	Gly	Val	Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys
	690					695					700				
Phe	Ile	Lys	Leu	Asn	Gln	Gln	Phe	Val	His	Phe	Thr	Gln	Leu	Asp	Leu
705					710					715					720
Ser	Tyr	Leu	Gln	Arg	Glu	Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val
				725					730					735	

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Tyr Gly Ala Pro Gln Leu Gln Val Glu Lys Val Arg Thr Asn Asp Arg
740 745 750
Lys Glu Leu Gly Glu Val Arg Val Gln Tyr Thr Gly Arg Asp Ser Phe
755 760 765
Lys Ala Phe Ala Lys Ala Leu Gly Val Met Asp Asp Leu Lys Ser Gly
770 775 780
Val Pro Arg Ala Gly Tyr Arg Gly Ile Val Thr Phe Gln Phe Arg Gly
785 790 795 800
Arg Arg Val His Leu Ala Pro Pro Pro Thr Trp Glu Gly Tyr Asp Pro
805 810 815
Ser Trp Asn

<210> 122
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<212> PRT
<213> Trichoderma reesei

<400> 122
Ser Thr Gly Asn Pro Ser Gly Gly Asn Pro Pro Gly Gly Asn Pro Pro
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Gly Ser Thr

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<400> 123
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Val Ala Ala Cys Gly Phe Val Leu Trp Ser Ser Asn Gly Arg Gln Arg
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Lys Asn Glu Ala Leu Ala Pro Pro Leu Leu Asp Ala Glu Pro Ala Arg
35 40 45
Gly Ala Gly Gly Arg Gly Gly Asp His Pro Ser Val Ala Val Gly Ile
50 55 60
Arg Arg Val Ser Asn Val Ser Ala Ala Ser Leu Val Pro Ala Val Pro
65 70 75 80
Gln Pro Glu Ala Asp Asn Leu Thr Leu Arg Tyr Arg Ser Leu Val Tyr
85 90 95
Gln Leu Asn Phe Asp Gln Thr Leu Arg Asn Val Asp Lys Ala Gly Thr
100 105 110
Trp Ala Pro Arg Glu Leu Val Leu Val Val Gln Val His Asn Arg Pro
115 120 125
Glu Tyr Leu Arg Leu Leu Leu Asp Ser Leu Arg Lys Ala Gln Gly Ile
130 135 140
Asp Asn Val Leu Val Ile Phe Ser His Asp Phe Trp Ser Thr Glu Ile
145 150 155 160
Asn Gln Leu Ile Ala Gly Val Asn Phe Cys Pro Val Leu Gln Val Phe
165 170 175
Phe Pro Phe Ser Ile Gln Leu Tyr Pro Asn Glu Phe Pro Gly Ser Asp
180 185 190
Pro Arg Asp Cys Pro Arg Asp Leu Pro Lys Asn Ala Ala Leu Lys Leu
195 200 205
Gly Cys Ile Asn Ala Glu Tyr Pro Asp Ser Phe Gly His Tyr Arg Glu
210 215 220
Ala Lys Phe Ser Gln Thr Lys His His Trp Trp Trp Lys Leu His Phe
225 230 235 240
Val Trp Glu Arg Val Lys Ile Leu Arg Asp Tyr Ala Gly Leu Ile Leu
245 250 255
Phe Leu Glu Glu Asp His Tyr Leu Ala Pro Asp Phe Tyr His Val Phe
260 265 270
Lys Lys Met Trp Lys Leu Lys Gln Gln Glu Cys Pro Glu Cys Asp Val
275 280 285

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Leu	Ser	Leu	Gly	Thr	Tyr	Ser	Ala	Ser	Arg	Ser	Phe	Tyr	Gly	Met	Ala
290	290					295				300					
Asp	Lys	Val	Asp	Val	Lys	Thr	Trp	Lys	Ser	Thr	Glu	His	Asn	Met	Gly
305					310					315					320
Leu	Ala	Leu	Thr	Arg	Asn	Ala	Tyr	Gln	Lys	Leu	Ile	Glu	Cys	Thr	Asp
				325					330					335	
Thr	Phe	Cys	Thr	Tyr	Asp	Asp	Tyr	Asn	Trp	Asp	Trp	Thr	Leu	Gln	Tyr
				340					345				350		
Leu	Thr	Val	Ser	Cys	Leu	Pro	Lys	Phe	Trp	Lys	Val	Leu	Val	Pro	Gln
		355					360					365			
Ile	Pro	Arg	Ile	Phe	His	Ala	Gly	Asp	Cys	Gly	Met	His	His	Lys	Lys
	370					375					380				
Thr	Cys	Arg	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn
385					390					395					400
Asn	Asn	Lys	Gln	Tyr	Met	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys
				405					410					415	
Phe	Thr	Val	Val	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly
			420					425					430		
Asp	Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln	Ser
		435					440					445			
Thr	Gly	Asn	Pro	Ser	Gly	Gly	Asn	Pro	Pro	Gly	Gly	Asn	Pro	Pro	Gly
	450					455					460				
Ser	Thr	Gly	Arg	Val	Pro	Thr	Ala	Ala	Pro	Pro	Ala	Gln	Pro	Arg	Val
465					470					475					480
Pro	Val	Thr	Pro	Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	Ile	Ala	Cys
				485					490					495	
Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	His	Tyr	Arg
			500					505					510		
Pro	Ser	Ala	Glu	Leu	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys	Gly	His
		515					520					525			
Glu	Glu	Thr	Ala	Gln	Ala	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	Val	Thr	His
	530					535					540				
Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro	Asp	His	Arg
545					550					555					560
Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	Trp	Ala	Leu
				565					570					575	
Gly	Gln	Val	Phe	Arg	Gln	Phe	Arg	Phe	Pro	Ala	Ala	Val	Val	Val	Glu
			580					585					590		
Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Arg	Ala	Thr
		595					600					605			
Tyr	Pro	Leu	Leu	Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	Ser	Ala	Trp
	610					615					620				
Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ala	Ser	Arg	Pro	Glu	Leu
625					630					635					640
Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	Leu	Leu	Ala
				645					650					655	
Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	Phe	Trp	Asp
			660					665					670		
Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala	Cys	Ile	Arg
		675					680					685			
Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	Val	Ser	His
	690					695					700				
Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	Asn	Gln	Gln
705					710					715					720
Phe	Val	His	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln	Arg	Glu	Ala
				725					730					735	
Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro	Gln	Leu	Gln
			740					745					750		
Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Arg	Lys	Glu	Leu	Gly	Glu	Val	Arg
		755					760					765			
Val	Gln	Tyr	Thr	Gly	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala	Lys	Ala	Leu
	770					775					780				
Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala	Gly	Tyr	Arg
785					790					795					800
Gly	Ile	Val	Thr	Phe	Gln	Phe	Arg	Gly	Arg	Arg	Val	His	Leu	Ala	Pro
				805					810					815	
Pro	Pro	Thr	Trp	Glu	Gly	Tyr	Asp	Pro	Ser	Trp	Asn				
			820					825							

eolf-seql

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 <212> PRT
 <213> Trichoderma reesei

<400> 124
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 1 5 10 15
 Ser Gly Pro Thr Ser
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<210> 125
 <211> 830
 <212> PRT
 <213> Trichoderma reesei

<400> 125
 Met Arg Phe Arg Ile Tyr Lys Arg Lys Val Leu Ile Leu Thr Leu Val
 1 5 10 15
 Val Ala Ala Cys Gly Phe Val Leu Trp Ser Ser Asn Gly Arg Gln Arg
 20 25 30
 Lys Asn Glu Ala Leu Ala Pro Pro Leu Leu Asp Ala Glu Pro Ala Arg
 35 40 45
 Gly Ala Gly Gly Arg Gly Gly Asp His Pro Ser Val Ala Val Gly Ile
 50 55 60
 Arg Arg Val Ser Asn Val Ser Ala Ala Ser Leu Val Pro Ala Val Pro
 65 70 75 80
 Gln Pro Glu Ala Asp Asn Leu Thr Leu Arg Tyr Arg Ser Leu Val Tyr
 85 90 95
 Gln Leu Asn Phe Asp Gln Thr Leu Arg Asn Val Asp Lys Ala Gly Thr
 100 105 110
 Trp Ala Pro Arg Glu Leu Val Leu Val Val Gln Val His Asn Arg Pro
 115 120 125
 Glu Tyr Leu Arg Leu Leu Leu Asp Ser Leu Arg Lys Ala Gln Gly Ile
 130 135 140
 Asp Asn Val Leu Val Ile Phe Ser His Asp Phe Trp Ser Thr Glu Ile
 145 150 155 160
 Asn Gln Leu Ile Ala Gly Val Asn Phe Cys Pro Val Leu Gln Val Phe
 165 170 175
 Phe Pro Phe Ser Ile Gln Leu Tyr Pro Asn Glu Phe Pro Gly Ser Asp
 180 185 190
 Pro Arg Asp Cys Pro Arg Asp Leu Pro Lys Asn Ala Ala Leu Lys Leu
 195 200 205
 Gly Cys Ile Asn Ala Glu Tyr Pro Asp Ser Phe Gly His Tyr Arg Glu
 210 215 220
 Ala Lys Phe Ser Gln Thr Lys His His Trp Trp Trp Lys Leu His Phe
 225 230 235 240
 Val Trp Glu Arg Val Lys Ile Leu Arg Asp Tyr Ala Gly Leu Ile Leu
 245 250 255
 Phe Leu Glu Glu Asp His Tyr Leu Ala Pro Asp Phe Tyr His Val Phe
 260 265 270
 Lys Lys Met Trp Lys Leu Lys Gln Glu Cys Pro Glu Cys Asp Val
 275 280 285
 Leu Ser Leu Gly Thr Tyr Ser Ala Ser Arg Ser Phe Tyr Gly Met Ala
 290 295 300
 Asp Lys Val Asp Val Lys Thr Trp Lys Ser Thr Glu His Asn Met Gly
 305 310 315 320
 Leu Ala Leu Thr Arg Asn Ala Tyr Gln Lys Leu Ile Glu Cys Thr Asp
 325 330 335
 Thr Phe Cys Thr Tyr Asp Asp Tyr Asn Trp Asp Trp Thr Leu Gln Tyr
 340 345 350
 Leu Thr Val Ser Cys Leu Pro Lys Phe Trp Lys Val Leu Val Pro Gln
 355 360 365
 Ile Pro Arg Ile Phe His Ala Gly Asp Cys Gly Met His His Lys Lys
 370 375 380

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Thr	Cys	Arg	Pro	Ser	Thr	Gln	Ser	Ala	Gln	Ile	Glu	Ser	Leu	Leu	Asn
385					390				395						400
Asn	Asn	Lys	Gln	Tyr	Met	Phe	Pro	Glu	Thr	Leu	Thr	Ile	Ser	Glu	Lys
				405					410					415	
Phe	Thr	Val	Val	Ala	Ile	Ser	Pro	Pro	Arg	Lys	Asn	Gly	Gly	Trp	Gly
			420					425					430		
Asp	Ile	Arg	Asp	His	Glu	Leu	Cys	Lys	Ser	Tyr	Arg	Arg	Leu	Gln	Ser
		435					440					445			
Ser	Ala	Ala	Thr	Ala	Thr	Ala	Ser	Ala	Thr	Val	Pro	Gly	Gly	Gly	Ser
	450					455					460				
Gly	Pro	Thr	Ser	Gly	Arg	Val	Pro	Thr	Ala	Ala	Pro	Pro	Ala	Gln	Pro
465					470					475					480
Arg	Val	Pro	Val	Thr	Pro	Ala	Pro	Ala	Val	Ile	Pro	Ile	Leu	Val	Ile
				485					490					495	
Ala	Cys	Asp	Arg	Ser	Thr	Val	Arg	Arg	Cys	Leu	Asp	Lys	Leu	Leu	His
			500					505					510		
Tyr	Arg	Pro	Ser	Ala	Glu	Leu	Phe	Pro	Ile	Ile	Val	Ser	Gln	Asp	Cys
		515					520					525			
Gly	His	Glu	Glu	Thr	Ala	Gln	Ala	Ile	Ala	Ser	Tyr	Gly	Ser	Ala	Val
	530					535					540				
Thr	His	Ile	Arg	Gln	Pro	Asp	Leu	Ser	Ser	Ile	Ala	Val	Pro	Pro	Asp
545					550					555					560
His	Arg	Lys	Phe	Gln	Gly	Tyr	Tyr	Lys	Ile	Ala	Arg	His	Tyr	Arg	Trp
				565					570					575	
Ala	Leu	Gly	Gln	Val	Phe	Arg	Gln	Phe	Arg	Phe	Pro	Ala	Ala	Val	Val
			580					585					590		
Val	Glu	Asp	Asp	Leu	Glu	Val	Ala	Pro	Asp	Phe	Phe	Glu	Tyr	Phe	Arg
		595					600					605			
Ala	Thr	Tyr	Pro	Leu	Leu	Lys	Ala	Asp	Pro	Ser	Leu	Trp	Cys	Val	Ser
	610					615					620				
Ala	Trp	Asn	Asp	Asn	Gly	Lys	Glu	Gln	Met	Val	Asp	Ala	Ser	Arg	Pro
625					630					635					640
Glu	Leu	Leu	Tyr	Arg	Thr	Asp	Phe	Phe	Pro	Gly	Leu	Gly	Trp	Leu	Leu
				645					650					655	
Leu	Ala	Glu	Leu	Trp	Ala	Glu	Leu	Glu	Pro	Lys	Trp	Pro	Lys	Ala	Phe
			660					665					670		
Trp	Asp	Asp	Trp	Met	Arg	Arg	Pro	Glu	Gln	Arg	Gln	Gly	Arg	Ala	Cys
		675					680					685			
Ile	Arg	Pro	Glu	Ile	Ser	Arg	Thr	Met	Thr	Phe	Gly	Arg	Lys	Gly	Val
	690					695					700				
Ser	His	Gly	Gln	Phe	Phe	Asp	Gln	His	Leu	Lys	Phe	Ile	Lys	Leu	Asn
705					710					715					720
Gln	Gln	Phe	Val	His	Phe	Thr	Gln	Leu	Asp	Leu	Ser	Tyr	Leu	Gln	Arg
				725					730					735	
Glu	Ala	Tyr	Asp	Arg	Asp	Phe	Leu	Ala	Arg	Val	Tyr	Gly	Ala	Pro	Gln
			740					745					750		
Leu	Gln	Val	Glu	Lys	Val	Arg	Thr	Asn	Asp	Arg	Lys	Glu	Leu	Gly	Glu
		755					760					765			
Val	Arg	Val	Gln	Tyr	Thr	Gly	Arg	Asp	Ser	Phe	Lys	Ala	Phe	Ala	Lys
	770					775					780				
Ala	Leu	Gly	Val	Met	Asp	Asp	Leu	Lys	Ser	Gly	Val	Pro	Arg	Ala	Gly
785					790					795					800
Tyr	Arg	Gly	Ile	Val	Thr	Phe	Gln	Phe	Arg	Gly	Arg	Arg	Val	His	Leu
				805					810					815	
Ala	Pro	Pro	Pro	Thr	Trp	Glu	Gly	Tyr	Asp	Pro	Ser	Trp	Asn		
			820					825					830		

<210> 126
 <211> 420
 <212> PRT
 <213> Trichoderma reesei

<400> 126
 Met Ala Ser Leu Ile Lys Thr Ala Val Asp Ile Ala Asn Gly Arg His
 1 5 10 15
 Ala Leu Ser Arg Tyr Val Ile Phe Gly Leu Trp Leu Ala Asp Ala Val
 20 25 30

eolf-seql

Leu	Cys	Gly	Leu	Ile	Ile	Trp	Lys	Val	Pro	Tyr	Thr	Glu	Ile	Asp	Trp
		35					40					45			
Val	Ala	Tyr	Met	Glu	Gln	Val	Thr	Gln	Phe	Val	His	Gly	Glu	Arg	Asp
	50					55					60				
Tyr	Pro	Lys	Met	Glu	Gly	Gly	Thr	Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala
65					70					75					80
His	Val	Tyr	Ile	Tyr	Thr	Gly	Leu	Tyr	Tyr	Leu	Thr	Asn	Lys	Gly	Thr
				85					90					95	
Asp	Ile	Leu	Leu	Ala	Gln	Gln	Leu	Phe	Ala	Val	Leu	Tyr	Met	Ala	Thr
			100					105					110		
Leu	Ala	Val	Val	Met	Thr	Cys	Tyr	Ser	Lys	Ala	Lys	Val	Pro	Pro	Tyr
		115					120					125			
Ile	Phe	Pro	Leu	Leu	Ile	Leu	Ser	Lys	Arg	Leu	His	Ser	Val	Phe	Val
	130					135					140				
Leu	Arg	Cys	Phe	Asn	Asp	Cys	Phe	Ala	Ala	Phe	Phe	Leu	Trp	Leu	Cys
145					150					155					160
Ile	Phe	Phe	Phe	Gln	Arg	Arg	Glu	Trp	Thr	Ile	Gly	Ala	Leu	Ala	Tyr
				165					170					175	
Ser	Ile	Gly	Leu	Gly	Val	Lys	Met	Ser	Leu	Leu	Leu	Val	Leu	Pro	Ala
			180					185					190		
Val	Val	Ile	Val	Leu	Tyr	Leu	Gly	Arg	Gly	Phe	Lys	Gly	Ala	Leu	Arg
		195					200					205			
Leu	Leu	Trp	Leu	Met	Val	Gln	Val	Gln	Leu	Leu	Leu	Ala	Ile	Pro	Phe
		210				215					220				
Ile	Thr	Thr	Asn	Trp	Arg	Gly	Tyr	Leu	Gly	Arg	Ala	Phe	Glu	Leu	Ser
225					230					235					240
Arg	Gln	Phe	Lys	Phe	Glu	Trp	Thr	Val	Asn	Trp	Arg	Met	Leu	Gly	Glu
				245					250					255	
Asp	Leu	Phe	Leu	Ser	Arg	Gly	Phe	Ser	Ile	Thr	Leu	Leu	Ala	Phe	His
			260					265					270		
Ala	Ile	Phe	Leu	Leu	Ala	Phe	Ile	Leu	Gly	Arg	Trp	Leu	Lys	Ile	Arg
		275					280					285			
Glu	Arg	Thr	Val	Leu	Gly	Met	Ile	Pro	Tyr	Val	Ile	Arg	Phe	Arg	Ser
	290					295					300				
Pro	Phe	Thr	Glu	Gln	Glu	Glu	Arg	Ala	Ile	Ser	Asn	Arg	Val	Val	Thr
305					310					315					320
Pro	Gly	Tyr	Val	Met	Ser	Thr	Ile	Leu	Ser	Ala	Asn	Val	Val	Gly	Leu
				325					330					335	
Leu	Phe	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Tyr	Ala	Tyr	Leu	Ala	Trp
			340					345					350		
Ala	Thr	Pro	Tyr	Leu	Leu	Trp	Thr	Ala	Cys	Pro	Asn	Leu	Leu	Val	Val
		355					360					365			
Ala	Pro	Leu	Trp	Ala	Ala	Gln	Glu	Trp	Ala	Trp	Asn	Val	Phe	Pro	Ser
	370					375					380				
Thr	Pro	Leu	Ser	Ser	Ser	Val	Val	Val	Ser	Val	Leu	Ala	Val	Thr	Val
385					390					395					400
Ala	Met	Ala	Phe	Ala	Gly	Ser	Asn	Pro	Gln	Pro	Arg	Glu	Thr	Ser	Lys
				405					410					415	
Pro	Lys	Gln	His												
			420												

<210> 127

<211> 525

<212> PRT

<213> Trichoderma atroviride

<400> 127

Met	Ala	Ser	Leu	Ile	Lys	Phe	Ala	Ser	Asp	Val	Ala	Thr	Gly	Arg	His
1				5					10					15	
Ala	Leu	Ser	Lys	Leu	Ile	Pro	Val	Gly	Leu	Phe	Leu	Ala	Asp	Ala	Ile
			20					25					30		
Leu	Cys	Gly	Leu	Val	Ile	Trp	Lys	Val	Pro	Tyr	Thr	Glu	Ile	Asp	Trp
		35					40					45			
Thr	Ala	Tyr	Met	Glu	Gln	Val	Thr	Gln	Phe	Val	Asn	Gly	Glu	Arg	Asp
	50					55					60				
Tyr	Pro	Lys	Met	Glu	Gly	Gly	Thr	Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala
65					70					75					80

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His	Val	Tyr	Ile	Tyr	Thr	Gly	Leu	Tyr	Tyr	Leu	Thr	Asn	Arg	Gly	Thr
Asp	Ile	Leu	Leu	Ala	Gln	Gln	Leu	Phe	Ala	Val	Leu	Tyr	Met	Ala	Thr
Leu	Gly	Val	Val	Met	Leu	Ser	Tyr	Trp	Lys	Ala	Arg	Val	Pro	Pro	Tyr
Ile	Phe	Pro	Leu	Leu	Ile	Leu	Ser	Lys	Arg	Leu	His	Ser	Val	Phe	Val
Leu	Arg	Cys	Phe	Asn	Asp	Cys	Phe	Ala	Ala	Phe	Phe	Leu	Trp	Leu	Cys
Ile	Tyr	Ser	Phe	Gln	Asn	Arg	Ala	Trp	Thr	Phe	Gly	Ala	Leu	Ala	Tyr
Thr	Leu	Gly	Leu	Gly	Val	Lys	Met	Ser	Leu	Leu	Leu	Val	Leu	Pro	Ala
Val	Val	Ile	Ile	Leu	Phe	Leu	Gly	Arg	Gly	Phe	Lys	Gly	Ala	Leu	Arg
Leu	Val	Trp	Leu	Met	Ala	Gln	Val	Gln	Leu	Val	Leu	Ala	Ile	Pro	Phe
Ile	Thr	Thr	Asn	Trp	Ala	Gly	Tyr	Leu	Gly	Arg	Ala	Phe	Glu	Leu	Ser
Arg	Gln	Phe	Lys	Phe	Glu	Trp	Thr	Val	Asn	Trp	Arg	Met	Met	Gly	Glu
Glu	Thr	Phe	Leu	Ser	Arg	Gly	Phe	Ser	Ile	Thr	Leu	Leu	Thr	Phe	His
Val	Val	Thr	Leu	Leu	Val	Phe	Ile	Ala	Ala	Arg	Trp	Leu	Lys	Leu	Gln
Glu	Arg	Ser	Leu	Leu	Gly	Ile	Ile	Thr	Tyr	Ala	Val	Arg	Phe	Gln	Ser
Pro	Phe	Thr	Glu	Gln	Glu	Glu	Ala	Lys	Val	Ser	Lys	Lys	Val	Val	Thr
Pro	Arg	Tyr	Val	Leu	Ala	Thr	Ile	Leu	Ser	Ala	Asn	Val	Ile	Gly	Leu
Leu	Phe	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Tyr	Ala	Tyr	Leu	Ala	Trp
Ala	Thr	Pro	Phe	Leu	Leu	Trp	Thr	Ala	Tyr	Pro	Asn	Leu	Leu	Val	Val
Val	Pro	Leu	Trp	Leu	Ala	Gln	Glu	Trp	Ala	Trp	Asn	Val	Phe	Pro	Ser
Thr	Pro	Leu	Ser	Ser	Ser	Val	Val	Ile	Ser	Leu	Val	Pro	Val	Cys	Leu
Leu	Ser	Pro	Gln	Leu	Leu	Val	Ser	His	Asp	Ile	Tyr	Asn	Phe	Ala	Asn
Cys	Ser	Ala	Ile	Leu	Arg	Pro	Arg	Gly	Ile	Ala	Phe	Gly	Gln	Asp	Ile
Ser	Ala	Thr	Leu	Asn	Pro	Asp	Gly	Val	Ala	Lys	Pro	Leu	Gly	Glu	Leu
Glu	Asn	Asp	Gly	Leu	Arg	Val	Trp	His	Leu	Ala	Ser	Val	Gln	Val	Val
Ser	Phe	Gly	Leu	His	His	Ala	His	Asn	Glu	Leu	Gly	Gly	Leu	Gln	Phe
Gly	Trp	Trp	Arg	Glu	Arg	Phe	Leu	Arg	Gly	Gly	Glu	Asp	Val	Ala	Leu
Trp	Phe	Ala	His	Gly	Gly	Phe	Glu	Phe	Arg	Phe	Phe	Ser	Glu	Leu	Leu
Val	Arg	Leu	Ala	Asp	Thr	Ser	Asp	Ile	Lys	Lys	Ser	Phe			

<210> 128
 <211> 419
 <212> PRT
 <213> Trichoderma virens

<400> 128
 Met Ala Ser Leu Ile Lys Phe Ala Ser Asp Val Ala Asn Gly Arg His
 1 5 10 15
 Ala Leu Ser Lys Phe Ile Pro Met Gly Leu Trp Leu Ala Asp Ala Val
 20 25 30

eolf-seql

Leu	Cys	Gly	Leu	Ile	Ile	Trp	Lys	Val	Pro	Tyr	Thr	Glu	Ile	Asp	Trp
		35					40					45			
Val	Ala	Tyr	Met	Glu	Gln	Ile	Thr	Gln	Phe	Val	His	Gly	Glu	Arg	Asp
	50					55					60				
Tyr	Pro	Lys	Met	Glu	Gly	Gly	Thr	Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala
65					70					75					80
His	Val	Tyr	Ile	Tyr	Thr	Gly	Leu	Tyr	Tyr	Leu	Thr	Asn	Lys	Gly	Thr
				85					90					95	
Asp	Ile	Leu	Leu	Ala	Gln	Gln	Leu	Phe	Ala	Val	Leu	Tyr	Met	Ala	Thr
			100					105					110		
Leu	Gly	Val	Val	Met	Leu	Cys	Tyr	Trp	Lys	Ala	Lys	Val	Pro	Pro	Tyr
		115					120					125			
Ile	Phe	Pro	Leu	Leu	Ile	Leu	Ser	Lys	Arg	Leu	His	Ser	Val	Phe	Val
	130					135					140				
Leu	Arg	Cys	Phe	Asn	Asp	Cys	Phe	Ala	Ala	Phe	Phe	Leu	Trp	Leu	Ser
145					150					155					160
Ile	Phe	Phe	Phe	Gln	Arg	Arg	Val	Trp	Thr	Leu	Gly	Ala	Ile	Ala	Tyr
				165					170					175	
Thr	Ile	Gly	Leu	Gly	Val	Lys	Met	Ser	Leu	Leu	Leu	Val	Leu	Pro	Ala
			180					185					190		
Val	Val	Ile	Val	Leu	Phe	Leu	Gly	Arg	Gly	Phe	Lys	Gly	Ala	Leu	Arg
		195					200					205			
Leu	Leu	Trp	Leu	Met	Val	Gln	Val	Gln	Leu	Leu	Leu	Ala	Ile	Pro	Phe
		210				215					220				
Ile	Thr	Thr	Asn	Trp	Lys	Gly	Tyr	Leu	Gly	Arg	Ala	Phe	Glu	Leu	Ser
225					230					235					240
Arg	Gln	Phe	Lys	Phe	Glu	Trp	Thr	Val	Asn	Trp	Arg	Met	Leu	Gly	Glu
				245					250					255	
Glu	Leu	Phe	Leu	Ser	Arg	Gly	Phe	Ser	Ile	Thr	Leu	Leu	Ala	Phe	His
			260					265					270		
Ala	Leu	Phe	Leu	Leu	Ile	Phe	Ile	Leu	Gly	Arg	Trp	Leu	Arg	Ile	Lys
		275					280					285			
Glu	Arg	Ser	Phe	Leu	Gly	Met	Ile	Pro	Tyr	Val	Leu	Arg	Phe	Thr	Ser
	290					295					300				
Pro	Phe	Thr	Glu	His	Glu	Glu	Ala	Ser	Ile	Ser	His	Arg	Val	Val	Thr
305					310					315					320
Pro	Glu	Tyr	Ile	Met	Ser	Ala	Met	Leu	Ser	Ala	Asn	Val	Val	Gly	Leu
				325					330					335	
Leu	Phe	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Tyr	Ala	Tyr	Leu	Ala	Trp
			340					345					350		
Ala	Thr	Pro	Phe	Leu	Leu	Trp	Thr	Ala	Ser	Pro	Asn	Leu	Leu	Val	Val
		355					360					365			
Val	Pro	Leu	Trp	Ala	Ala	Gln	Glu	Trp	Ala	Trp	Asn	Val	Phe	Pro	Ser
	370					375					380				
Thr	Pro	Leu	Ser	Ser	Asn	Val	Val	Val	Ser	Val	Leu	Ala	Val	Thr	Val
385					390					395					400
Ala	Met	Ala	Phe	Val	Gly	Ser	Asn	Pro	Gln	Arg	Gly	Ala	Pro	Lys	Pro
				405					410					415	
Lys	Gln	Leu													

<210> 129

<211> 434

<212> PRT

<213> Fusarium oxysporum

<400> 129

Met	Pro	Glu	Ser	Ala	Ser	Gly	Thr	Leu	Ser	Gln	Gly	Val	Arg	Phe	Leu
1				5				10					15		
Arg	Asn	Val	Leu	Asn	Gly	Arg	His	Ala	Leu	Ser	Lys	Leu	Ile	Pro	Ile
			20					25					30		
Ala	Leu	Trp	Leu	Val	Asp	Ala	Leu	Gly	Cys	Gly	Leu	Ile	Ile	Trp	Lys
		35					40					45			
Ile	Pro	Tyr	Thr	Glu	Ile	Asp	Trp	Val	Ala	Tyr	Met	Gln	Gln	Ile	Ser
	50					55					60				
Gln	Phe	Val	Ser	Gly	Glu	Arg	Asp	Tyr	Thr	Lys	Met	Glu	Gly	Asp	Thr
65					70					75					80

eolf-seql

Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala	His	Val	Tyr	Thr	Tyr	Thr	Gly	Leu
				85					90					95	
Tyr	Tyr	Ile	Thr	Asp	Lys	Gly	Thr	Asn	Ile	Leu	Leu	Ala	Gln	Gln	Ile
			100					105					110		
Phe	Ala	Val	Leu	Tyr	Met	Ala	Thr	Leu	Ala	Val	Val	Met	Leu	Cys	Tyr
		115					120					125			
Trp	Lys	Ala	Lys	Val	Pro	Pro	Tyr	Met	Phe	Ile	Phe	Leu	Ile	Ala	Ser
	130					135					140				
Lys	Arg	Leu	His	Ser	Leu	Phe	Val	Leu	Arg	Cys	Phe	Asn	Asp	Cys	Phe
145					150					155					160
Ala	Val	Phe	Phe	Leu	Trp	Leu	Thr	Ile	Phe	Leu	Phe	Gln	Arg	Arg	Gln
			165						170					175	
Trp	Thr	Val	Gly	Ser	Leu	Val	Tyr	Ser	Trp	Gly	Leu	Gly	Ile	Lys	Met
			180					185					190		
Ser	Leu	Leu	Leu	Val	Leu	Pro	Ala	Ile	Gly	Val	Ile	Leu	Phe	Leu	Gly
		195					200					205			
Arg	Gly	Leu	Trp	Pro	Ser	Leu	Arg	Leu	Ala	Trp	Leu	Met	Ala	Gln	Ile
	210					215					220				
Gln	Phe	Ala	Ile	Gly	Leu	Pro	Phe	Ile	Thr	Lys	Asn	Pro	Arg	Gly	Tyr
225					230					235					240
Ala	Ala	Arg	Ala	Phe	Glu	Leu	Ser	Arg	Gln	Phe	Gln	Phe	Lys	Trp	Thr
			245						250					255	
Val	Asn	Trp	Arg	Met	Leu	Gly	Glu	Glu	Val	Phe	Leu	Ser	Lys	Tyr	Phe
			260					265					270		
Ala	Leu	Ser	Leu	Leu	Ala	Cys	His	Ile	Leu	Val	Leu	Leu	Ile	Phe	Ile
		275					280					285			
Ser	Lys	Arg	Trp	Ile	Gln	Pro	Thr	Gly	Arg	Ser	Leu	Tyr	Asp	Leu	Ile
	290					295					300				
Pro	Ser	Phe	Leu	Arg	Leu	Lys	Ser	Pro	Phe	Thr	Met	Gln	Glu	Gln	Leu
305					310					315					320
Arg	Ile	Ser	His	Tyr	Val	Thr	Pro	Glu	Tyr	Ala	Met	Thr	Thr	Met	Leu
			325						330					335	
Thr	Ala	Asn	Leu	Ile	Gly	Leu	Leu	Phe	Ala	Arg	Ser	Leu	His	Tyr	Gln
		340						345					350		
Phe	Tyr	Ala	Tyr	Leu	Ala	Trp	Ala	Thr	Pro	Tyr	Leu	Leu	Trp	Arg	Ala
		355					360					365			
Thr	Glu	Asp	Pro	Val	Ile	Val	Ala	Ile	Ile	Trp	Ala	Ala	Gln	Glu	Trp
	370					375					380				
Ala	Trp	Asn	Val	Tyr	Pro	Ser	Thr	Asp	Leu	Ser	Ser	Thr	Ile	Ala	Val
385					390					395					400
Asn	Thr	Met	Leu	Ala	Thr	Val	Val	Leu	Val	Tyr	Leu	Gly	Thr	Ala	Arg
			405						410					415	
Arg	Ala	Val	Pro	Ala	Pro	Ala	Ala	Gln	Val	Gly	Asn	Val	Asp	Asp	Lys
			420					425					430		

Asn Lys

<210> 130
 <211> 432
 <212> PRT
 <213> Gibberella zeae

<400> 130

Met	Ala	Asp	Pro	Ala	Pro	Gly	Ala	Leu	Ala	Arg	Gly	Thr	Arg	Phe	Val
1				5					10					15	
Arg	Asn	Val	Leu	Thr	Gly	Gln	His	Ala	Leu	Ser	Lys	Leu	Ile	Pro	Val
		20						25					30		
Ala	Leu	Trp	Leu	Ala	Asp	Ala	Val	Gly	Thr	Ser	Leu	Ile	Ile	Trp	Lys
		35					40					45			
Val	Pro	Tyr	Thr	Glu	Ile	Asp	Trp	Glu	Ala	Tyr	Met	Gln	Gln	Val	Ser
	50					55					60				
Gln	Phe	Ile	Ser	Gly	Glu	Arg	Asp	Tyr	Thr	Lys	Ile	Glu	Gly	Gly	Thr
65					70					75					80
Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala	His	Val	Tyr	Thr	Phe	Thr	Gly	Leu
			85						90					95	
Tyr	His	Ile	Thr	Asn	Glu	Gly	Glu	Asn	Ile	Phe	Leu	Ala	Gln	Gln	Ile
			100					105					110		

eolf-seql

Phe	Gly	Val	Leu	Tyr	Met	Ala	Thr	Leu	Ala	Val	Val	Met	Leu	Cys	Tyr
		115					120					125			
Trp	Lys	Ala	Lys	Val	Pro	Pro	Tyr	Met	Phe	Val	Phe	Leu	Ile	Ala	Ser
	130					135					140				
Lys	Arg	Leu	His	Ser	Leu	Phe	Val	Leu	Arg	Cys	Phe	Asn	Asp	Cys	Phe
145					150					155					160
Ala	Val	Phe	Phe	Leu	Trp	Leu	Ser	Ile	Tyr	Phe	Phe	Gln	Arg	Arg	Asn
				165					170					175	
Trp	Thr	Phe	Gly	Ser	Leu	Ala	Tyr	Thr	Trp	Gly	Leu	Gly	Ile	Lys	Met
			180					185					190		
Ser	Leu	Leu	Leu	Val	Leu	Pro	Ala	Ile	Gly	Val	Ile	Leu	Leu	Leu	Gly
		195					200					205			
Arg	Gly	Phe	Trp	Pro	Gly	Leu	Arg	Leu	Ala	Trp	Leu	Met	Ala	Gln	Val
	210					215					220				
Gln	Phe	Ala	Ile	Gly	Ile	Pro	Phe	Ile	Met	Lys	Asn	Ser	Arg	Gly	Tyr
225					230					235					240
Ala	Ala	Arg	Ala	Phe	Glu	Leu	Ser	Arg	Glu	Phe	Lys	Phe	Glu	Trp	Thr
				245					250					255	
Val	Asn	Trp	Arg	Met	Leu	Gly	Glu	Glu	Val	Phe	Leu	Ser	Lys	Ser	Phe
			260					265					270		
Ala	Ile	Phe	Leu	Leu	Ala	Cys	His	Val	Thr	Ala	Leu	Leu	Val	Phe	Ile
		275					280					285			
Ser	Gln	Arg	Trp	Leu	Gln	Pro	Thr	Gly	Arg	Pro	Leu	Ser	Ala	Met	Ile
	290					295					300				
Pro	Ser	Phe	Leu	Gln	Leu	Lys	Ser	Pro	Phe	Thr	Leu	Gln	Glu	Gln	Leu
305					310					315					320
Arg	Ile	Ser	His	Tyr	Val	Thr	Pro	Glu	Tyr	Val	Met	Thr	Thr	Met	Leu
				325					330					335	
Ser	Ala	Asn	Val	Ile	Gly	Leu	Leu	Phe	Ala	Arg	Ser	Leu	His	Tyr	Gln
			340					345					350		
Phe	Tyr	Ala	Tyr	Leu	Ala	Trp	Ala	Ser	Pro	Tyr	Leu	Ile	Trp	Arg	Ala
		355					360					365			
Thr	Glu	Asp	Pro	Phe	Ile	Val	Leu	Leu	Ile	Trp	Ala	Ala	Gln	Glu	Trp
	370					375					380				
Ala	Trp	Asn	Val	Phe	Pro	Ser	Thr	Asp	Leu	Ser	Ser	Arg	Val	Thr	Val
385					390					395					400
Gly	Ala	Met	Leu	Ala	Thr	Val	Val	Leu	Ala	Tyr	Arg	Gly	Thr	Ala	Arg
				405					410					415	
Leu	Ala	Val	Pro	Pro	Ser	Gln	Ala	Arg	Lys	Ile	Glu	Ala	Lys	Asn	Lys
			420					425					430		

<210> 131

<211> 446

<212> PRT

<213> Myceliophthora thermophila

<400> 131

Met	Thr	Arg	Met	Arg	Ser	Ser	Pro	Lys	Thr	Pro	Thr	Ala	Thr	Met	Ala
1				5					10					15	
Asp	Gln	Asn	Arg	Pro	Ile	His	Ile	Arg	Ala	Thr	Arg	Leu	Val	Phe	Asp
			20					25					30		
Ile	Leu	Asn	Gly	Arg	His	Val	Leu	Ser	Lys	Leu	Ile	Pro	Leu	Val	
		35					40					45			
Phe	Leu	Ala	Asp	Ala	Leu	Leu	Cys	Ala	Leu	Ile	Ile	Trp	Lys	Val	Pro
	50					55				60					
Tyr	Thr	Glu	Ile	Asp	Trp	Asn	Ala	Tyr	Met	Glu	Gln	Val	Ala	Gln	Ile
65					70				75					80	
Leu	Ser	Gly	Glu	Arg	Asp	Tyr	Thr	Lys	Ile	Arg	Gly	Asn	Thr	Gly	Pro
				85					90					95	
Leu	Val	Tyr	Pro	Ala	Ala	His	Val	Tyr	Ile	Tyr	Thr	Gly	Leu	Tyr	His
			100					105					110		
Leu	Thr	Asp	Glu	Gly	Arg	Asn	Ile	Leu	Thr	Ala	Gln	Lys	Leu	Phe	Gly
		115					120					125			
Phe	Leu	Tyr	Met	Val	Thr	Leu	Ala	Val	Val	Met	Ala	Cys	Tyr	Trp	Gln
	130					135					140				
Ala	Lys	Val	Pro	Pro	Tyr	Val	Phe	Pro	Leu	Leu	Ile	Leu	Ser	Lys	Arg
145					150					155					160

eo1f-seq1

Leu	His	Ser	Ile	Phe	Val	Leu	Arg	Cys	Phe	Asn	Asp	Cys	Phe	Ala	Thr
				165					170					175	
Leu	Phe	Leu	Trp	Leu	Ala	Ile	Phe	Ala	Leu	Gln	Arg	Arg	Ala	Trp	Arg
			180					185					190		
Thr	Gly	Ala	Leu	Met	Tyr	Thr	Leu	Gly	Leu	Gly	Val	Lys	Met	Ser	Leu
		195					200					205			
Leu	Leu	Val	Leu	Pro	Ala	Val	Gly	Val	Val	Leu	Leu	Gly	Ala	Gly	
		210				215					220				
Phe	Ala	Thr	Ser	Leu	Arg	Leu	Ala	Ala	Val	Ile	Gly	Leu	Val	Gln	Val
225					230					235					240
Leu	Ile	Ala	Val	Pro	Phe	Leu	Ser	Asn	Asn	Pro	Trp	Gly	Tyr	Leu	Gly
				245					250					255	
Arg	Ala	Phe	Glu	Leu	Ser	Arg	Gln	Phe	Phe	Phe	Lys	Trp	Thr	Val	Asn
			260					265					270		
Trp	Arg	Phe	Val	Gly	Glu	Glu	Val	Phe	Leu	Ser	Lys	Glu	Phe	Ser	Leu
		275					280					285			
Ala	Leu	Leu	Gly	Leu	His	Val	Ala	Val	Leu	Ala	Ile	Phe	Val	Thr	Thr
		290				295					300				
Arg	Trp	Leu	Lys	Pro	Ala	Arg	Lys	Pro	Val	Ser	Gln	Leu	Ile	Val	Pro
305					310					315					320
Ile	Leu	Leu	Gly	Lys	Ser	Pro	Phe	Thr	Glu	Glu	Glu	Gln	Arg	Ala	Val
				325					330					335	
Ser	Arg	Asp	Val	Thr	Pro	Arg	Phe	Ile	Leu	Thr	Ser	Ile	Leu	Ser	Ala
			340					345					350		
Asn	Val	Val	Gly	Leu	Leu	Phe	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Tyr
		355					360					365			
Ser	Tyr	Leu	Ala	Trp	Met	Thr	Pro	Tyr	Leu	Leu	Trp	Arg	Ser	Gly	Val
		370				375					380				
His	Pro	Ile	Leu	Gln	Tyr	Ala	Ile	Trp	Thr	Ala	Gln	Glu	Trp	Ala	Trp
385					390					395					400
Asn	Val	Tyr	Pro	Ser	Thr	Pro	Ile	Ser	Ser	Gly	Val	Val	Val	Gly	Val
				405					410					415	
Leu	Ala	Leu	Thr	Ala	Ala	Leu	Val	Trp	Leu	Gly	Ala	Arg	Glu	Asp	Trp
			420					425					430		
Glu	Pro	Arg	Arg	Val	Leu	Leu	Lys	Gly	Glu	Ala	Ala	Lys	Arg		
		435					440					445			

<210> 132

<211> 442

<212> PRT

<213> Neurospora crassa

<400> 132

Met	Ala	Ala	Pro	Ser	Ser	Arg	Pro	Glu	Ser	Asn	Pro	Pro	Leu	Tyr	Lys
1				5					10					15	
Gln	Ala	Leu	Asp	Phe	Ala	Leu	Asp	Val	Ala	Asn	Gly	Arg	His	Ala	Leu
			20					25					30		
Ser	Lys	Leu	Ile	Pro	Pro	Ala	Leu	Phe	Leu	Val	Asp	Ala	Leu	Leu	Cys
		35				40					45				
Gly	Leu	Ile	Ile	Trp	Lys	Val	Pro	Tyr	Thr	Glu	Ile	Asp	Trp	Ala	Ala
		50				55					60				
Tyr	Met	Glu	Gln	Val	Ser	Gln	Ile	Leu	Ser	Gly	Glu	Arg	Asp	Tyr	Thr
65					70					75				80	
Lys	Val	Arg	Gly	Gly	Thr	Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala	His	Val
				85					90					95	
Tyr	Ile	Tyr	Thr	Gly	Leu	Tyr	His	Leu	Thr	Asp	Glu	Gly	Arg	Asn	Ile
			100					105					110		
Leu	Leu	Ala	Gln	Gln	Leu	Phe	Ala	Gly	Leu	Tyr	Met	Val	Thr	Leu	Ala
		115					120					125			
Val	Val	Met	Gly	Cys	Tyr	Trp	Gln	Ala	Lys	Ala	Pro	Pro	Tyr	Leu	Phe
		130				135					140				
Pro	Leu	Leu	Thr	Leu	Ser	Lys	Arg	Leu	His	Ser	Ile	Phe	Val	Leu	Arg
145					150					155					160
Cys	Phe	Asn	Asp	Cys	Phe	Ala	Val	Leu	Phe	Leu	Trp	Leu	Ala	Ile	Phe
				165					170					175	
Phe	Phe	Gln	Arg	Arg	Asn	Trp	Gln	Ala	Gly	Ala	Leu	Leu	Tyr	Thr	Leu
			180					185					190		

eolf-seql

Gly	Leu	Gly	Val	Lys	Met	Thr	Leu	Leu	Leu	Ser	Leu	Pro	Ala	Val	Gly
Ile	Val	195	Phe	Leu	Gly	Ser	200	Gly	Ser	Phe	Val	Thr	205	Leu	Gln
210	Ala	Thr	Met	Gly	Leu	Val	Gln	Ile	Leu	Ile	Gly	Val	Pro	Phe	Leu
225	His	Tyr	Pro	Thr	Glu	Tyr	Leu	Ser	Arg	Ala	Phe	Glu	Leu	Ser	Arg
245	Phe	Phe	Phe	Lys	Trp	Thr	Val	Asn	Trp	Arg	Phe	Val	Gly	Glu	Glu
260	Ile	Phe	Leu	Ser	Lys	Gly	Phe	Ala	Leu	Thr	Leu	Leu	Ala	Leu	His
275	Val	Leu	Gly	Ile	Phe	Ile	Thr	Thr	Arg	Trp	Ile	Lys	Pro	Ala	Arg
290	Ser	Leu	Val	Gln	Leu	Ile	Ser	Pro	Val	Leu	Leu	Ala	Gly	Lys	Pro
305	Pro	Leu	Thr	Val	Pro	Glu	His	Arg	Ala	Ala	Ala	Arg	Asp	Val	Thr
325	Arg	Tyr	Ile	Met	Thr	Thr	Ile	Leu	Ser	Ala	Asn	Ala	Val	Gly	Leu
340	Phe	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Tyr	Ala	Tyr	Val	Ala	Trp
355	Thr	Pro	Phe	Leu	Leu	Trp	Arg	Ala	Gly	Leu	His	Pro	Val	Leu	Val
370	Leu	Leu	Trp	Ala	Val	His	Glu	Trp	Ala	Trp	Asn	Val	Phe	Pro	Ser
385	Pro	Ala	Ser	Ser	Ala	Val	Val	Val	Gly	Val	Leu	Gly	Val	Thr	Val
405	Gly	Val	Trp	Phe	Gly	Ala	Arg	Glu	Glu	Trp	Glu	Pro	Gly	Met	Lys
420	Ser	Ser	Lys	Lys	Glu	Glu	Ala	Ala	Met	Arg					
435															
440															

<210> 133
 <211> 413
 <212> PRT
 <213> Aspergillus oryzae

<400> 133

Met	Glu	Leu	Lys	His	Phe	Ile	His	Glu	Leu	Cys	Leu	Asn	Pro	Arg	His
1	Thr	Lys	Trp	Ile	Ala	Pro	Leu	Leu	Val	Ile	Gly	Asp	Ala	Phe	Leu
5	20								25					30	Cys
Ala	Leu	Ile	Ile	Trp	Lys	Ile	Pro	Tyr	Thr	Glu	Ile	Asp	Trp	Thr	Thr
35									40				45		
Tyr	Met	Gln	Gln	Ile	Ala	Leu	Tyr	Ile	Ser	Gly	Glu	Arg	Asp	Tyr	Thr
50											60				
Leu	Ile	Lys	Gly	Ser	Thr	Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala	His	Val
65										75				80	
Tyr	Ser	Tyr	Met	Ala	Leu	Tyr	His	Leu	Thr	Asp	Glu	Gly	Arg	Asp	Ile
85									90					95	
Leu	Phe	Gly	Gln	Ile	Leu	Phe	Ala	Val	Leu	Tyr	Leu	Val	Thr	Leu	Ala
100									105				110		
Val	Val	Met	Val	Cys	Tyr	Arg	Gln	Ser	Gly	Ala	Pro	Pro	Tyr	Leu	Phe
115									120				125		
Pro	Leu	Leu	Val	Leu	Ser	Lys	Arg	Leu	His	Ser	Val	Phe	Val	Leu	Arg
130											140				
Leu	Phe	Asn	Asp	Gly	Leu	Ala	Val	Cys	Ala	Met	Trp	Ile	Ala	Ile	Leu
145										155				160	
Leu	Phe	Gln	Asn	Lys	Lys	Trp	Thr	Ala	Gly	Val	Thr	Ala	Trp	Thr	Val
165									170					175	
Gly	Val	Gly	Ile	Lys	Met	Thr	Leu	Leu	Leu	Leu	Ala	Pro	Ala	Ile	Ala
180									185				190		
Val	Val	Thr	Val	Leu	Ser	Leu	Ser	Leu	Val	Pro	Ser	Ile	Arg	Leu	Gly
195									200				205		
Ile	Leu	Ala	Leu	Leu	Ile	Gln	Val	Leu	Leu	Ala	Ile	Pro	Phe	Leu	Gln
210												220			

ecolf-seql

Gly	Asn	Pro	Ile	Gly	Tyr	Val	Ala	Arg	Ala	Phe	Glu	Leu	Thr	Arg	Gln
225					230					235					240
Phe	Met	Phe	Lys	Trp	Thr	Val	Asn	Trp	Arg	Phe	Val	Gly	Glu	Asp	Leu
				245					250					255	
Phe	Leu	Ser	Lys	Gln	Phe	Ser	Leu	Ala	Leu	Leu	Gly	Leu	His	Ile	Phe
			260					265					270		
Leu	Leu	Gly	Leu	Phe	Val	Thr	Thr	Gly	Trp	Leu	Arg	Pro	Ser	Gly	Ser
		275					280					285			
Asn	Val	Pro	Asp	Phe	Leu	Arg	Ser	Leu	Leu	Gln	Gly	Arg	Gln	Arg	Thr
	290					295					300				
Val	Val	Leu	Ser	Lys	Ser	Phe	Ile	Met	Thr	Val	Met	Leu	Thr	Ser	Leu
305					310					315					320
Ala	Ile	Gly	Leu	Leu	Cys	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Phe	Ala
				325					330					335	
Tyr	Leu	Ser	Trp	Ala	Thr	Pro	Cys	Leu	Leu	Trp	Arg	Ala	Arg	Leu	His
			340					345					350		
Pro	Ile	Leu	Ile	Tyr	Ala	Ile	Trp	Ala	Leu	Gln	Glu	Trp	Ala	Trp	Asn
		355					360					365			
Val	Tyr	Pro	Ser	Thr	Asn	Ala	Ser	Ser	Ser	Val	Val	Val	Phe	Ser	Leu
	370					375					380				
Ala	Val	Gln	Val	Phe	Gly	Val	Leu	Leu	Asn	Ser	Arg	Asn	Ala	Leu	Ser
385					390					395					400
Asp	Ala	Pro	Pro	Arg	Arg	Lys	Gly	Lys	Glu	His	Ile	Gln			
				405					410						

<210> 134

<211> 411

<212> PRT

<213> Neosartorya fischeri

<400> 134

Met	Asp	Leu	Lys	His	Thr	Leu	Arg	Asp	Leu	Cys	Met	Asn	Pro	Arg	His
1				5					10					15	
Thr	Arg	Trp	Val	Ala	Pro	Leu	Leu	Ile	Leu	Gly	Asp	Ala	Val	Leu	Cys
			20					25					30		
Ala	Leu	Ile	Ile	Trp	Lys	Val	Pro	Tyr	Thr	Glu	Ile	Asp	Trp	Thr	Thr
		35					40					45			
Tyr	Met	Gln	Gln	Ile	Ser	Leu	Tyr	Ile	Ser	Gly	Glu	Arg	Asp	Tyr	Thr
	50					55					60				
Leu	Ile	Lys	Gly	Ser	Thr	Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala	His	Val
65					70					75				80	
Tyr	Ile	Phe	Asn	Ile	Leu	Tyr	His	Leu	Thr	Asp	Glu	Gly	Arg	Asp	Ile
			85						90					95	
Phe	Leu	Gly	Gln	Ile	Leu	Phe	Ala	Ile	Leu	Tyr	Leu	Ala	Thr	Leu	Thr
			100					105					110		
Val	Ala	Met	Thr	Cys	Tyr	Arg	Gln	Ala	Gly	Ala	Pro	Pro	Tyr	Leu	Leu
		115					120					125			
Val	Pro	Leu	Val	Leu	Ser	Lys	Arg	Leu	His	Ser	Val	Phe	Met	Leu	Arg
	130					135					140				
Leu	Phe	Asn	Asp	Gly	Phe	Ala	Ala	Tyr	Ala	Met	Trp	Val	Ser	Ile	Leu
145					150					155				160	
Leu	Phe	Met	Asn	Lys	Lys	Trp	Thr	Ala	Gly	Ala	Ile	Val	Trp	Ser	Thr
			165						170					175	
Gly	Val	Gly	Ile	Lys	Met	Thr	Leu	Leu	Leu	Ala	Pro	Ala	Ile	Ala	
			180					185					190		
Val	Val	Leu	Val	Leu	Ser	Leu	Ser	Leu	Gly	Pro	Ser	Met	Gln	Leu	Gly
		195					200					205			
Phe	Leu	Ala	Val	Leu	Ile	Gln	Val	Leu	Phe	Gly	Ile	Pro	Phe	Leu	Gln
	210					215					220				
Asn	Asn	Pro	Ala	Gly	Tyr	Val	Ser	Arg	Ala	Phe	Glu	Leu	Thr	Arg	Gln
225					230					235					240
Phe	Met	Phe	Lys	Trp	Thr	Val	Asn	Trp	Arg	Phe	Val	Gly	Glu	Glu	Leu
			245						250					255	
Phe	Leu	Ser	Arg	Lys	Phe	Ser	Leu	Ala	Leu	Leu	Ala	Leu	His	Ile	Leu
			260					265					270		
Leu	Leu	Gly	Leu	Phe	Val	Ala	Thr	Val	Trp	Leu	Lys	Pro	Ser	Gly	Ser
		275					280					285			

eolf-seql

Asp	Leu	Pro	Ser	Phe	Leu	Gln	Arg	Leu	Ile	Gln	Arg	Arg	Tyr	Arg	Thr
290						295				300					
Ala	Ser	Leu	Ser	Lys	Ser	Phe	Ile	Met	Thr	Ala	Met	Leu	Ser	Ser	Leu
305					310					315					320
Ala	Ile	Gly	Leu	Leu	Cys	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Phe	Ala
				325					330					335	
Tyr	Leu	Ala	Cys	Ala	Thr	Pro	Phe	Leu	Trp	Gln	Ala	Gly	Phe	His	
			340					345				350			
Pro	Ile	Leu	Val	Tyr	Val	Val	Trp	Val	Ala	Gln	Glu	Trp	Ala	Trp	Asn
		355					360					365			
Thr	Tyr	Pro	Ser	Thr	Asn	Ala	Ser	Ser	Leu	Val	Val	Ile	Leu	Ser	Leu
	370					375					380				
Ala	Ala	Gln	Val	Phe	Gly	Val	Leu	Gly	Asn	Ser	Phe	Ser	Arg	Lys	His
385					390					395					400
Leu	Asp	Gln	Ser	Ser	Gln	Lys	Glu	His	Leu	Gln					
				405					410						

<210> 135

<211> 413

<212> PRT

<213> Aspergillus niger

<400> 135

Met	Asp	Trp	Met	Arg	Leu	Ile	Arg	Asp	Leu	Cys	Phe	Asn	Pro	Arg	His
1				5					10					15	
Thr	Lys	Trp	Met	Ala	Pro	Leu	Leu	Val	Leu	Gly	Asp	Ala	Phe	Leu	Cys
			20					25					30		
Ala	Leu	Ile	Ile	Trp	Lys	Val	Pro	Tyr	Thr	Glu	Ile	Asp	Trp	Ala	Thr
		35					40					45			
Tyr	Met	Gln	Gln	Ile	Ser	Leu	Tyr	Leu	Ser	Gly	Glu	Arg	Asp	Tyr	Thr
	50					55					60				
Leu	Ile	Arg	Gly	Ser	Thr	Gly	Pro	Leu	Val	Tyr	Pro	Ala	Ala	His	Val
65					70					75					80
Tyr	Ser	Tyr	Thr	Ala	Leu	Tyr	His	Leu	Thr	Asp	Glu	Gly	Arg	Asp	Ile
				85					90					95	
Phe	Phe	Gly	Gln	Ile	Leu	Phe	Ala	Val	Leu	Tyr	Leu	Ile	Thr	Leu	Val
			100					105					110		
Val	Val	Leu	Cys	Cys	Tyr	Arg	Gln	Ser	Gly	Ala	Pro	Pro	Tyr	Leu	Leu
		115					120					125			
Pro	Leu	Leu	Val	Leu	Ser	Lys	Arg	Leu	His	Ser	Val	Tyr	Val	Leu	Arg
	130					135					140				
Leu	Phe	Asn	Asp	Gly	Leu	Ala	Ala	Leu	Ala	Met	Trp	Val	Ala	Ile	Leu
145					150					155					160
Leu	Phe	Met	Asn	Arg	Lys	Trp	Thr	Ala	Ala	Val	Ala	Val	Trp	Ser	Thr
			165						170					175	
Gly	Val	Ala	Ile	Lys	Met	Thr	Leu	Leu	Leu	Leu	Ala	Pro	Ala	Ile	Ala
			180					185					190		
Val	Val	Thr	Val	Leu	Ser	Leu	Ser	Leu	Gly	Pro	Ser	Val	Gly	Leu	Gly
		195					200					205			
Val	Leu	Ala	Val	Leu	Val	Gln	Val	Leu	Leu	Ala	Ile	Pro	Phe	Leu	Gln
	210					215					220				
Asn	Asn	Pro	Ala	Gly	Tyr	Leu	Ser	Arg	Ala	Phe	Glu	Leu	Thr	Arg	Gln
225					230					235					240
Phe	Met	Phe	Lys	Trp	Thr	Val	Asn	Trp	Arg	Phe	Val	Gly	Glu	Glu	Val
			245						250					255	
Phe	Leu	Ser	Lys	Ser	Phe	Ser	Leu	Ala	Leu	Leu	Ala	Val	His	Ile	Val
			260					265					270		
Leu	Leu	Gly	Ala	Phe	Ala	Val	Thr	Gly	Trp	Leu	Arg	Tyr	Ser	Arg	Ser
		275					280					285			
Ser	Leu	Pro	Ala	Phe	Ile	Arg	Asn	Leu	Leu	Ala	Gly	Arg	His	Arg	Thr
	290					295					300				
Val	Ser	Leu	Pro	Lys	Pro	Tyr	Ile	Met	Ser	Val	Met	Leu	Ser	Ser	Leu
305					310					315					320
Thr	Val	Gly	Leu	Leu	Cys	Ala	Arg	Ser	Leu	His	Tyr	Gln	Phe	Phe	Ala
				325					330					335	
Tyr	Leu	Ser	Trp	Ala	Thr	Pro	Phe	Leu	Trp	Arg	Ala	Gly	Phe	His	
			340					345				350			

eolf-seql

Pro	Ile	Leu	Leu	Tyr	Leu	Ile	Trp	Ala	Met	Gln	Glu	Trp	Ala	Trp	Asn
		355					360					365			
Thr	Phe	Pro	Ser	Thr	Asn	Leu	Ser	Ser	Ile	Ile	Val	Val	Leu	Ser	Leu
	370					375					380				
Ala	Thr	Gln	Ser	Phe	Gly	Val	Leu	Ala	Asn	Ser	Ala	Ser	Ala	Phe	Tyr
385					390					395					400
Thr	Met	Arg	Ser	Asn	Pro	Ser	Gly	Lys	Glu	His	Asn	Gln			
				405					410						

<210> 136
 <211> 357
 <212> PRT
 <213> Magnaporthe oryzae

<400> 136

Met	Ala	Ala	Glu	Arg	Pro	Ser	Thr	Leu	Gly	Lys	Pro	Val	Gln	Phe	Val
1				5					10					15	
Phe	Asp	Val	Ala	Asn	Gly	Arg	His	Pro	Leu	Ser	Arg	Ala	Ile	Pro	Pro
			20					25					30		
Met	Leu	Leu	Ala	Phe	Asp	Gly	Leu	Leu	Cys	Gly	Leu	Ile	Ile	Lys	Lys
		35					40					45			
Val	Pro	Ser	Cys	Tyr	Arg	Lys	Ala	Lys	Val	Pro	Pro	Tyr	Val	Leu	Pro
	50					55				60					
Leu	Leu	Val	Leu	Ser	Lys	Arg	Leu	His	Ser	Ile	Phe	Val	Leu	Arg	Cys
65					70					75					80
Phe	Asn	Asp	Cys	Phe	Ala	Val	Leu	Phe	Phe	Trp	Leu	Ala	Ile	Tyr	Cys
				85					90					95	
Phe	Gln	Arg	Arg	Ala	Trp	Ser	Leu	Gly	Gly	Val	Phe	Tyr	Ser	Phe	Gly
			100					105					110		
Leu	Gly	Ile	Lys	Met	Thr	Val	Leu	Leu	Ser	Leu	Pro	Ala	Val	Gly	Val
		115					120					125			
Ile	Leu	Leu	Leu	Gly	Arg	Gly	Phe	Gly	Gly	Ala	Leu	Asn	Val	Ala	Ser
	130					135				140					
Ile	Met	Gly	Gln	Leu	Gln	Val	Ala	Ile	Gly	Leu	Pro	Phe	Leu	Ser	Lys
145					150					155					160
Asn	Ala	Trp	Gly	Tyr	Leu	Ser	Arg	Ala	Phe	Glu	Leu	Ser	Arg	Gln	Phe
				165					170					175	
Met	Phe	Lys	Trp	Thr	Val	Asn	Trp	Arg	Phe	Val	Gly	Glu	Glu	Thr	Phe
			180					185					190		
Leu	Ser	Lys	Pro	Phe	Ala	Ile	Thr	Leu	Leu	Ala	Leu	His	Ala	Ser	Val
		195					200					205			
Leu	Leu	Ala	Phe	Val	Thr	Lys	Arg	Trp	Leu	Lys	Pro	Ala	Ser	Lys	Ser
	210					215					220				
Ile	Gly	Gly	Leu	Ile	Ala	Pro	Leu	Leu	Ser	Gly	Arg	Pro	Ile	Phe	Thr
225					230					235					240
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				245					250					255	
Met	Thr	Thr	Met	Leu	Thr	Ala	Asn	Ile	Val	Gly	Met	Leu	Phe	Ala	Arg
			260					265					270		
Ser	Leu	His	Tyr	Gln	Phe	Tyr	Ala	Tyr	Leu	Ala	Trp	Ser	Thr	Pro	Tyr
		275					280					285			
Leu	Leu	Trp	Arg	Ser	Gly	Ile	His	Pro	Leu	Leu	Gln	Trp	Gly	Leu	Trp
	290					295					300				
Ala	Leu	Gln	Glu	Trp	Ala	Trp	Asn	Val	Tyr	Pro	Ser	Thr	Pro	Val	Ser
305					310					315					320
Ser	Gly	Val	Val	Val	Gly	Val	Met	Ala	Ile	Thr	Val	Gly	Ala	Val	Met
				325					330					335	
Val	Gly	Ala	Lys	Ala	Glu	Phe	Arg	Pro	Gln	Val	Pro	Val	Ala	Lys	Lys
			340					345					350		
Val	Glu	Ala	Lys	Arg											
		355													

<210> 137
 <211> 406
 <212> PRT
 <213> Schizosaccharomyces pombe

eolf-seql

<400> 137

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Leu Glu Ile Pro Phe Val Phe Ala Ile Ile Ser Lys Val Pro Tyr Thr
 35      40      45
Glu Ile Asp Trp Ile Ala Tyr Met Glu Gln Val Asn Ser Phe Leu Leu
 50      55      60
Gly Glu Arg Asp Tyr Lys Ser Leu Val Gly Cys Thr Gly Pro Leu Val
 65      70      75      80
Tyr Pro Gly Gly His Val Phe Leu Tyr Thr Leu Tyr Tyr Leu Thr
 85      90      95
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100      105      110
Tyr Trp Ile Thr Thr Ala Ile Val Gly Tyr Leu Phe Lys Ile Val Arg
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Ala Pro Phe Tyr Ile Tyr Val Leu Leu Ile Leu Ser Lys Arg Leu His
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Ser Ile Phe Ile Leu Arg Leu Phe Asn Asp Gly Phe Asn Ser Leu Phe
145      150      155      160
Ser Ser Leu Phe Ile Leu Ser Ser Cys Lys Lys Lys Trp Val Arg Ala
165      170      175
Ser Ile Leu Leu Ser Val Ala Cys Ser Val Lys Met Ser Ser Leu Leu
180      185      190
Tyr Val Pro Ala Tyr Leu Val Leu Leu Leu Gln Ile Leu Gly Pro Lys
195      200      205
Lys Thr Trp Met His Ile Phe Val Ile Ile Ile Val Gln Ile Leu Phe
210      215      220
Ser Ile Pro Phe Leu Ala Tyr Phe Trp Ser Tyr Trp Thr Gln Ala Phe
225      230      235      240
Asp Phe Gly Arg Ala Phe Asp Tyr Lys Trp Thr Val Asn Trp Arg Phe
245      250      255
Ile Pro Arg Ser Ile Phe Glu Ser Thr Ser Phe Ser Thr Ser Ile Leu
260      265      270
Phe Leu His Val Ala Leu Leu Val Ala Phe Thr Cys Lys His Trp Asn
275      280      285
Lys Leu Ser Arg Ala Thr Pro Phe Ala Met Val Asn Ser Met Leu Thr
290      295      300
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Thr Ala Leu Ala Thr Ser Asn Leu Ile Gly Ile Leu Cys Ala Arg Ser
325      330      335
Leu His Tyr Gln Phe Tyr Ala Trp Phe Ala Trp Tyr Ser Pro Tyr Leu
340      345      350
Cys Tyr Gln Ala Ser Phe Pro Ala Pro Ile Val Ile Gly Leu Trp Met
355      360      365
Leu Gln Glu Tyr Ala Trp Asn Val Phe Pro Ser Thr Lys Leu Ser Ser
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<210> 138

<211> 30

<212> DNA

<213> Artificial Sequence

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<223> Synthesized Construct

<400> 138

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<210> 139

eolf-seql

<211> 2460
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

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<210> 140
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized Construct

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<210> 141
<211> 2475
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 141

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<210> 142

<211> 57

<212> DNA

<213> *Trichoderma reesei*

<400> 142

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<210> 143

<211> 2487

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 143

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eolf-seql

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 <211> 65
 <212> DNA
 <213> *Trichoderma reesei*

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<210> 145
 <211> 2493
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthesized Construct

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eolf-seq1

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<210> 146

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 146

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45

<210> 147

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized Construct

<400> 147

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38