

SEQUENCE LISTING

<110> Linnane Pharm AB

<120> Novel Therapy

<130> P3095/WO

<150> GB1617548.1

<151> 2016-10-17

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<170> BiSSAP 1.3.6

<210> 1

<211> 330

<212> PRT

<213> Escherichia coli

<220>

<223> Sigma S protein

<400> 1

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

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225					230						235				240
Glu	Lys	Glu	Asn	Gly	Pro	Glu	Asp	Thr	Thr	Gln	Asp	Asp	Asp	Met	Lys
				245						250				255	
Gln	Ser	Ile	Val	Lys	Trp	Leu	Phe	Glu	Leu	Asn	Ala	Lys	Gln	Arg	Glu
			260					265					270		
Val	Leu	Ala	Arg	Arg	Phe	Gly	Leu	Leu	Gly	Tyr	Glu	Ala	Ala	Thr	Leu
		275					280					285			
Glu	Asp	Val	Gly	Arg	Glu	Ile	Gly	Leu	Thr	Arg	Glu	Arg	Val	Arg	Gln
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Ile	Gln	Val	Glu	Gly	Leu	Arg	Arg	Leu	Arg	Glu	Ile	Leu	Gln	Thr	Gln
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<212> PRT

<213> Escherichia coli

<220>

<223> Sigma S protein

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Gly	Val	Glu	Val	Phe	Asp	Glu	Lys	Ala	Leu	Val	Glu	Glu	Glu	Pro	Ser
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Asp	Asn	Asp	Leu	Ala	Glu	Glu	Glu	Leu	Leu	Ser	Gln	Gly	Ala	Thr	Gln
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Arg	Val	Leu	Asp	Ala	Thr	Gln	Leu	Tyr	Leu	Gly	Glu	Ile	Gly	Tyr	Ser
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Pro	Leu	Leu	Thr	Ala	Glu	Glu	Glu	Val	Tyr	Phe	Ala	Arg	Arg	Ala	Leu
			85					90						95	
Arg	Gly	Asp	Val	Ala	Ser	Arg	Arg	Arg	Met	Ile	Glu	Ser	Asn	Leu	Arg
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Leu	Val	Val	Lys	Ile	Ala	Arg	Arg	Tyr	Gly	Asn	Arg	Gly	Leu	Ala	Leu
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Lys	Phe	Asp	Pro	Glu	Arg	Gly	Phe	Arg	Phe	Ser	Thr	Tyr	Ala	Thr	Trp
145					150					155					160
Trp	Ile	Arg	Gln	Thr	Ile	Glu	Arg	Ala	Ile	Met	Asn	Gln	Thr	Arg	Thr
				165					170					175	

Ile	Arg	Leu	Pro	Ile	His	Ile	Val	Lys	Glu	Leu	Asn	Val	Tyr	Leu	Arg
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Glu	Ile	Ala	Glu	Gln	Leu	Asp	Lys	Pro	Val	Asp	Asp	Val	Ser	Arg	Met
	210					215					220				
Leu	Arg	Leu	Asn	Glu	Arg	Ile	Thr	Ser	Val	Asp	Thr	Pro	Leu	Gly	Gly
225					230					235				240	
Asp	Ser	Glu	Lys	Ala	Leu	Leu	Asp	Ile	Leu	Ala	Asp	Glu	Lys	Glu	Asn
			245						250					255	
Gly	Pro	Glu	Asp	Thr	Thr	Gln	Asp	Asp	Asp	Met	Lys	Gln	Ser	Ile	Val
			260					265					270		
Lys	Trp	Leu	Phe	Glu	Leu	Asn	Ala	Lys	Gln	Arg	Glu	Val	Leu	Ala	Arg
	275						280					285			
Arg	Phe	Gly	Leu	Leu	Gly	Tyr	Glu	Ala	Ala	Thr	Leu	Glu	Asp	Val	Gly
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Arg	Glu	Ile	Gly	Leu	Thr	Arg	Glu	Arg	Val	Arg	Gln	Ile	Gln	Val	Glu
305					310					315					320
Gly	Leu	Arg	Arg	Leu	Arg	Glu	Ile	Leu	Gln	Thr	Gln	Gly	Leu	Asn	Ile
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Glu	Ala	Leu	Phe	Arg	Glu										
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 <213> Escherichia coli

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 Ile Arg Leu Pro Ile His Ile Val Lys Glu Leu Asn Val Tyr Leu Arg
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 Thr Ala Arg
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 <212> PRT
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<220>
 <223> NplD protein

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