

Sequence_Listing.txt

SEQUENCE LISTING

<110> Oxyrane UK Limited
VIB vzw
Universiteit Gent

<120> De-Mannosylation of Phosphorylated
N-Glycans

<130> 18990-0031WO1

<140> PCT/IB2011/002780

<141> 2011-09-29

<150> US 61/387,924

<151> 2010-09-29

<160> 5

<170> FastSEQ for Windows Version 4.0

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<211> 2743

<212> DNA

<213> Artificial Sequence

<220>

<223> yarrowia codon optimized sequence encoding alpha
glucosidase

<400> 1

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Sequence_Listing.txt

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<211> 913

<212> PRT

<213> Artificial Sequence

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<223> Fusion of Yarrowia LIP2 signal sequence to human
alpha glucosidase

<400> 2

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

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Sequence_Listing.txt

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Arg Pro Tyr Asp Glu Gly Leu Arg Arg Gly Val Phe Ile Thr Asn Glu
          420          425          430
Thr Gly Gln Pro Leu Ile Gly Lys Val Trp Pro Gly Ser Thr Ala Phe
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Pro Asp Phe Thr Asn Pro Thr Ala Leu Ala Trp Trp Glu Asp Met Val
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Ala Glu Phe His Asp Gln Val Pro Phe Asp Gly Met Trp Ile Asp Met
465          470          475          480
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          485          490          495
Asn Glu Leu Glu Asn Pro Pro Tyr Val Pro Gly Val Val Gly Gly Thr
          500          505          510
Leu Gln Ala Ala Thr Ile Cys Ala Ser Ser His Gln Phe Leu Ser Thr
          515          520          525
His Tyr Asn Leu His Asn Leu Tyr Gly Leu Thr Glu Ala Ile Ala Ser
          530          535          540
His Arg Ala Leu Val Lys Ala Arg Gly Thr Arg Pro Phe Val Ile Ser
545          550          555          560
Arg Ser Thr Phe Ala Gly His Gly Arg Tyr Ala Gly His Trp Thr Gly
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Asp Val Trp Ser Ser Trp Glu Gln Leu Ala Ser Ser Val Pro Glu Ile
          580          585          590
Leu Gln Phe Asn Leu Leu Gly Val Pro Leu Val Gly Ala Asp Val Cys
          595          600          605
Gly Phe Leu Gly Asn Thr Ser Glu Glu Leu Cys Val Arg Trp Thr Gln
          610          615          620
Leu Gly Ala Phe Tyr Pro Phe Met Arg Asn His Asn Ser Leu Leu Ser
625          630          635          640
Leu Pro Gln Glu Pro Tyr Ser Phe Ser Glu Pro Ala Gln Gln Ala Met
          645          650          655
Arg Lys Ala Leu Thr Leu Arg Tyr Ala Leu Leu Pro His Leu Tyr Thr
          660          665          670
Leu Phe His Gln Ala His Val Ala Gly Glu Thr Val Ala Arg Pro Leu
          675          680          685
Phe Leu Glu Phe Pro Lys Asp Ser Ser Thr Trp Thr Val Asp His Gln
          690          695          700
Leu Leu Trp Gly Glu Ala Leu Leu Ile Thr Pro Val Leu Gln Ala Gly
705          710          715          720
Lys Ala Glu Val Thr Gly Tyr Phe Pro Leu Gly Thr Trp Tyr Asp Leu
          725          730          735
Gln Thr Val Pro Val Glu Ala Leu Gly Ser Leu Pro Pro Pro Pro Ala
          740          745          750
Ala Pro Arg Glu Pro Ala Ile His Ser Glu Gly Gln Trp Val Thr Leu
          755          760          765
Pro Ala Pro Leu Asp Thr Ile Asn Val His Leu Arg Ala Gly Tyr Ile
          770          775          780
Ile Pro Leu Gln Gly Pro Gly Leu Thr Thr Thr Glu Ser Arg Gln Gln
785          790          795          800
Pro Met Ala Leu Ala Val Ala Leu Thr Lys Gly Gly Glu Ala Arg Gly
          805          810          815
Glu Leu Phe Trp Asp Asp Gly Glu Ser Leu Glu Val Leu Glu Arg Gly
          820          825          830
Ala Tyr Thr Gln Val Ile Phe Leu Ala Arg Asn Asn Thr Ile Val Asn
          835          840          845
Glu Leu Val Arg Val Thr Ser Glu Gly Ala Gly Leu Gln Leu Gln Lys
          850          855          860
Val Thr Val Leu Gly Val Ala Thr Ala Pro Gln Gln Val Leu Ser Asn
865          870          875          880
Gly Val Pro Val Ser Asn Phe Thr Tyr Ser Pro Asp Thr Lys Val Leu
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Cys

```

<210> 3
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 sequence to Cellulostimicrobium cellulans
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Sequence_Listing.txt

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 <213> Aspergillus saitoi

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 85 90 95
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 Tyr Ser Lys Thr Asn Thr Thr Val Ser Leu Phe Glu Thr Thr Ile Arg
 115 120 125
 Tyr Leu Gly Gly Met Leu Ser Gly Tyr Asp Leu Leu Lys Gly Pro Val
 130 135 140
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 Ser Lys Asn Leu Ala Asp Val Leu Lys Phe Ala Phe Asp Thr Pro Ser
 165 170 175
 Gly Val Pro Tyr Asn Asn Leu Asn Ile Thr Ser Gly Gly Asn Asp Gly
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 Ala Lys Thr Asn Gly Leu Ala Val Thr Gly Thr Leu Ala Leu Glu Trp
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 Thr Arg Leu Ser Asp Leu Thr Gly Asp Thr Thr Tyr Ala Asp Leu Ser
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 Gln Lys Ala Glu Ser Tyr Leu Leu Asn Pro Gln Pro Lys Ser Ala Glu
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 260 265 270
 Glu Tyr Leu Ile Lys Met Tyr Val Tyr Asp Pro Lys Arg Phe Gly Leu
 275 280 285
 Tyr Lys Asp Arg Trp Val Ala Ala Gln Ser Thr Met Gln His Leu
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 Ala Ser His Pro Ser Ser Arg Pro Asp Leu Thr Phe Leu Ala Ser Tyr
 305 310 315 320
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 340 345 350
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 Ser Thr Leu Thr Gly Ile Gly Pro Glu Ser Phe Ser Trp Asp Thr Ser
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 465 470 475 480

Sequence_Listing.txt

Met	Ala	Phe	Ala	Glu	Asp	Ala	Ala	Trp	Gln	Val	Gln	Pro	Gly	Ser	Gly
				485					490					495	
Asn	Gln	Phe	Val	Phe	Asn	Thr	Glu	Ala	His	Pro	Val	Arg	Val	Ser	Ser
			500					505					510		
Thr															