

PhoenixTemp17088.tmp.txt
SEQUENCE LISTING

<110> Novozymes A/S

<120> whey protein hydrolysate

<130> 11267

<160> 8

<170> PatentIn version 3.5

<210> 1

<211> 744

<212> DNA

<213> Fusarium oxysporum

<400> 1

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agtctgtctc gcacttctgg tggattacc tcctcgcttt cctccgtcag agttcaccct	300
agctacagcg gaaacaacaa cgatcttgct attctgaagc tctctacttc catcccctcc	360
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cttctgaagg ttactgtccc tatcgtctct cgtgctacct gccgagctca gtacggcacc	540
tccgccatca ccaaccagat gttctgtgct ggtgtttctt ccggtggcaa ggactcttgc	600
cagggtgaca gcggcggccc catcgtcgac agctccaaca ctcttatcgg tgctgtctct	660
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<210> 2

<211> 248

<212> PRT

<213> Fusarium oxysporum

<400> 2

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

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gccgaagcgg tgatcgaagc ggtgatcccc cgcgacaagg tcggcgagtt caagctgcgc      540
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gcgtccggcg agaagggcgt gtcgggttcg tgcaacatcg acgtggtctg ccccgaaggc      660
gacggccgcc gcgacatcat ccgcgcggtc ggtgctgact cgaagagcgg cagctgggcc      720
tgtaccggtt cgctgggtcaa caacaccgcc aacgaccgca agatgtactt cctgaccgcg      780
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cagaactcga cctgccgcgc gcccaacacg ccggccagcg gcgccaacgg cgacggctcg      900
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cgcatcagca actccaccag cccgacctcg ttcgtggcct ggggcggcgg cgccggcacc     1140
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acctacacca acgacaccga tgtggcgatc ccggacaacg cgacggtcga aagcccgatc     1740
accgtgtccg gccgcaccgg caacggctcg gcgaccacgc cgatccaggt gacgatctac     1800
cacacctaca agagcgatct gaaggtggac ctggtcgcgc cggacggcac cgtctacaac     1860
ctgcacaacc gcaccggcgg cagcgcgcac aacatcatcc agaccttcac caaggacctg     1920
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<210> 4
<211> 653
<212> PRT
<213> Achromobacter lyticus

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<400> 4
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Met Lys Arg Ile Cys Gly Ser Leu Leu Leu Leu Gly Leu Ser Ile Ser
1          5          10          15
```

```
Ala Ala Leu Ala Ala Pro Ala Ser Arg Pro Ala Ala Phe Asp Tyr Ala
20          25          30
```

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

Leu Leu Glu Leu Asn Asn Ala Ala Asn Pro Ala Phe Asn Leu Phe Trp
 325 330 335

Ala Gly Trp Asp Arg Arg Asp Gln Asn Tyr Pro Gly Ala Ile Ala Ile
 340 345 350

His His Pro Asn Val Ala Glu Lys Arg Ile Ser Asn Ser Thr Ser Pro
 355 360 365

Thr Ser Phe Val Ala Trp Gly Gly Gly Ala Gly Thr Thr His Leu Asn
 370 375 380

Val Gln Trp Gln Pro Ser Gly Gly Val Thr Glu Pro Gly Ser Ser Gly
 385 390 395 400

Ser Pro Ile Tyr Ser Pro Glu Lys Arg Val Leu Gly Gln Leu His Gly
 405 410 415

Gly Pro Ser Ser Cys Ser Ala Thr Gly Thr Asn Arg Ser Asp Gln Tyr
 420 425 430

Gly Arg Val Phe Thr Ser Trp Thr Gly Gly Gly Ala Ala Ala Ser Arg
 435 440 445

Leu Ser Asp Trp Leu Asp Pro Ala Ser Thr Gly Ala Gln Phe Ile Asp
 450 455 460

Gly Leu Asp Ser Gly Gly Gly Thr Pro Asn Thr Pro Pro Val Ala Asn
 465 470 475 480

Phe Thr Ser Thr Thr Ser Gly Leu Thr Ala Thr Phe Thr Asp Ser Ser
 485 490 495

Thr Asp Ser Asp Gly Ser Ile Ala Ser Arg Ser Trp Asn Phe Gly Asp
 500 505 510

Gly Ser Thr Ser Thr Ala Thr Asn Pro Ser Lys Thr Tyr Ala Ala Ala
 515 520 525

Gly Thr Tyr Thr Val Thr Leu Thr Val Thr Asp Asn Gly Gly Ala Thr
 530 535 540

Asn Thr Lys Thr Gly Ser Val Thr Val Ser Gly Gly Pro Gly Ala Gln
 545 550 555 560

Thr Tyr Thr Asn Asp Thr Asp Val Ala Ile Pro Asp Asn Ala Thr Val
 565 570 575

Glu Ser Pro Ile Thr Val Ser Gly Arg Thr Gly Asn Gly Ser Ala Thr
 580 585 590

Thr Pro Ile Gln Val Thr Ile Tyr His Thr Tyr Lys Ser Asp Leu Lys

595

600

605

Val Asp Leu Val Ala Pro Asp Gly Thr Val Tyr Asn Leu His Asn Arg
610 615 620

Thr Gly Gly Ser Ala His Asn Ile Ile Gln Thr Phe Thr Lys Asp Leu
625 630 635 640

Ser Ser Glu Ala Ala Gln Arg Ala Pro Gly Ser Cys Gly
645 650

<210> 5
<211> 753
<212> DNA
<213> Fusarium solani

<400> 5
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gtcagcatcg cctacaatgg tggcccttgg tgcggaggta ccctcctcaa cgccaacacc 180
gtcatgactg ctgcccactg cacccaaggt cgctctgcta gcgccttcca ggtccgcgcc 240
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cctagcttca gtagctcgac cctgaacaac gatgtttcca tcctgaagct gtccaccccc 360
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attgtttctt ggggtgaggg ttgtgctcag cccaacttat ctggtgtcta tgcccagatt 720
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<210> 6
<211> 251
<212> PRT
<213> Fusarium solani

<400> 6
Met Val Lys Phe Ala Ala Ile Leu Ala Leu Val Ala Pro Leu Val Ala
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Ala Arg Pro Gln Asp Ser Ser Pro Met Ile Val Gly Gly Thr Ala Ala
20 25 30

Ser Ala Gly Asp Phe Pro Phe Ile Val Ser Ile Ala Tyr Asn Gly Gly
35 40 45

Pro Trp Cys Gly Gly Thr Leu Leu Asn Ala Asn Thr Val Met Thr Ala
50 55 60

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Ala His Cys Thr Gln Gly Arg Ser Ala Ser Ala Phe Gln Val Arg Ala
65 70 75 80

Gly Ser Leu Asn Arg Asn Ser Gly Gly Val Thr Ser Ser Val Ser Ser
85 90 95

Ile Arg Ile His Pro Ser Phe Ser Ser Ser Thr Leu Asn Asn Asp Val
100 105 110

Ser Ile Leu Lys Leu Ser Thr Pro Ile Ser Thr Ser Ser Thr Ile Ser
115 120 125

Tyr Gly Arg Leu Ala Ala Ser Gly Ser Asp Pro Val Ala Gly Ser Asp
130 135 140

Ala Thr Val Ala Gly Trp Gly Val Thr Ser Gln Gly Ser Ser Ser Ser
145 150 155 160

Pro Val Ala Leu Arg Lys Val Thr Ile Pro Ile Val Ser Arg Thr Thr
165 170 175

Cys Arg Ser Gln Tyr Gly Thr Ser Ala Ile Thr Thr Asn Met Phe Cys
180 185 190

Ala Gly Leu Ala Glu Gly Gly Lys Asp Ser Cys Gln Gly Asp Ser Gly
195 200 205

Gly Pro Ile Val Asp Thr Ser Asn Thr Val Ile Gly Ile Val Ser Trp
210 215 220

Gly Glu Gly Cys Ala Gln Pro Asn Leu Ser Gly Val Tyr Ala Arg Val
225 230 235 240

Gly Ser Leu Arg Thr Tyr Ile Asp Gly Gln Leu
245 250

<210> 7
<211> 750
<212> DNA
<213> Fusarium cf. solani

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agcatcgctt acaatggtgg cccttggtgc ggaggtaccc tcctcaacgc cagcaccgtc 180
ttgactgctg cccactgcac ccaaggctgc tctgctagcg ccttccaggt ccgcgctgga 240
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tcttgccagg gcgacagcgg tgggtccatt gtcgacacct ccaacactgt cattggcatt	660
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<210> 8
 <211> 250
 <212> PRT
 <213> Fusarium cf. solani

<400> 8

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