

# SEQUENCE LISTING

<110> Bayer CropScience AG

<120> Wheat starch and wheat flours and foodstuffs containing this wheat starch/wheat flours

<130> BCS 08-5010 PCT

<150> EP08075631.5

<151> 2008-07-10

<150> US61/134,465

<151> 2008-07-10

<160> 18

<170> PatentIn version 3.3

<210> 1

<211> 2433

<212> DNA

<213> Oryza sativa

<400> 1

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 <211> 810  
 <212> PRT  
 <213> Oryza sativa

<400> 2

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 35 40 45

Ala Leu Arg Ala Pro Pro Pro Pro Arg Pro Arg Pro Arg Arg Arg Asp  
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Ala Gly Val Val Arg Arg Ala Asp Asp Gly Glu Asn Glu Ala Ala Val  
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Glu Arg Ala Gly Glu Asp Asp Asp Glu Glu Glu Glu Phe Ser Ser Gly  
 85 90 95

Ala Trp Gln Pro Pro Arg Ser Arg Arg Gly Gly Val Gly Lys Val Leu  
 100 105 110

Lys Arg Arg Gly Thr Val Pro Pro Val Gly Arg Tyr Gly Ser Gly Gly  
 115 120 125

Asp Ala Ala Arg Val Arg Gly Ala Ala Ala Pro Ala Pro Ala Pro Thr  
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Gln Asp Ala Ala Ser Ser Lys Asn Gly Ala Leu Leu Ser Gly Arg Asp  
 145 150 155 160

Asp Asp Thr Pro Ala Ser Arg Asn Gly Ser Val Val Thr Gly Ala Asp  
 165 170 175

Lys Pro Ala Ala Ala Thr Pro Pro Val Thr Ile Thr Lys Leu Pro Ala  
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Pro Asp Ser Pro Val Ile Leu Pro Ser Val Asp Lys Pro Gln Pro Glu  
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Phe Val Ile Pro Asp Ala Thr Ala Pro Ala Pro Pro Pro Gly Ser  
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Asn Pro Arg Ser Ser Ala Pro Leu Pro Lys Pro Asp Asn Ser Glu Phe  
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Ala Glu Asp Lys Ser Ala Lys Val Val Glu Ser Ala Pro Lys Pro Lys  
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Ala Thr Arg Ser Ser Pro Ile Pro Ala Val Glu Glu Glu Thr Trp Asp  
 260 265 270

Phe Lys Lys Tyr Phe Asp Leu Asn Glu Pro Asp Ala Ala Glu Asp Gly  
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Asp Asp Asp Asp Asp Trp Ala Asp Ser Asp Ala Ser Asp Ser Glu Ile  
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Asp Gln Asp Asp Asp Ser Gly Pro Leu Ala Gly Glu Asn Val Met Asn  
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Val Ile Val Val Ala Ala Glu Cys Ser Pro Trp Cys Lys Thr Gly Gly  
 325 330 335

Leu Gly Asp Val Ala Gly Ala Leu Pro Lys Ala Leu Ala Arg Arg Gly

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Gln Asp Val Gly Ile Arg Lys Tyr Tyr Lys Ala Ala Gly Gln Asp Leu		
370	375	380
Glu Val Lys Tyr Phe His Ala Phe Ile Asp Gly Val Asp Phe Val Phe		
385	390	395
Ile Asp Ala Pro Leu Phe Arg His Arg Gln Asp Asp Ile Tyr Gly Gly		
405	410	415
Asn Arg Gln Glu Ile Met Lys Arg Met Ile Leu Phe Cys Lys Ala Ala		
420	425	430
Val Glu Val Pro Trp His Val Pro Cys Gly Gly Val Pro Tyr Gly Asp		
435	440	445
Gly Asn Leu Val Phe Leu Ala Asn Asp Trp His Thr Ala Leu Leu Pro		
450	455	460
Val Tyr Leu Lys Ala Tyr Tyr Arg Asp Asn Gly Met Met Gln Tyr Thr		
465	470	475
Arg Ser Val Leu Val Ile His Asn Ile Ala Tyr Gln Gly Arg Gly Pro		
485	490	495
Val Asp Glu Phe Pro Tyr Met Glu Leu Pro Glu His Tyr Leu Asp His		
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Phe Lys Leu Tyr Asp Pro Val Gly Gly Glu His Ala Asn Ile Phe Gly		
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Ala Gly Leu Lys Met Ala Asp Arg Val Val Thr Val Ser Pro Gly Tyr		
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Leu Trp Glu Leu Lys Thr Thr Glu Gly Gly Trp Gly Leu His Asp Ile  
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Ile Arg Glu Asn Asp Trp Lys Met Asn Gly Ile Val Asn Gly Ile Asp  
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Tyr Arg Glu Trp Asn Pro Glu Val Asp Val His Leu Gln Ser Asp Gly  
 580 585 590

Tyr Ala Asn Tyr Thr Val Ala Ser Leu Asp Ser Ser Lys Pro Arg Cys  
 595 600 605

Lys Ala Ala Leu Gln Arg Glu Leu Gly Leu Glu Val Arg Asp Asp Val  
 610 615 620

Pro Leu Ile Gly Phe Ile Gly Arg Leu Asp Gly Gln Lys Gly Val Asp  
 625 630 635 640

Ile Ile Gly Asp Ala Met Pro Trp Ile Ala Gly Gln Asp Val Gln Leu  
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Val Leu Leu Gly Ser Gly Arg Arg Asp Leu Glu Val Met Leu Gln Arg  
 660 665 670

Phe Glu Ala Gln His Asn Ser Lys Val Arg Gly Trp Val Gly Phe Ser  
 675 680 685

Val Lys Met Ala His Arg Ile Thr Ala Gly Ala Asp Val Leu Val Met  
 690 695 700

Pro Ser Arg Phe Glu Pro Cys Gly Leu Asn Gln Leu Tyr Ala Met Ala  
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Tyr Gly Thr Val Pro Val Val His Ala Val Gly Gly Leu Arg Asp Thr  
 725 730 735

Met Ser Ala Phe Asp Pro Phe Glu Asp Thr Gly Leu Gly Trp Thr Phe

740

745

750

Asp Arg Ala Glu Pro His Lys Leu Ile Glu Ala Leu Gly His Cys Leu  
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Glu Thr Tyr Arg Lys Tyr Lys Glu Ser Trp Arg Gly Leu Gln Val Arg  
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Gly Met Ser Gln Asp Leu Ser Trp Asp His Ala Ala Glu Leu Tyr Glu  
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Glu Val Leu Val Lys Ala Lys Tyr Gln Trp  
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 <211> 2433  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <223> Synthetic DNA, mutation at position 2209

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<211> 810

<212> PRT

<213> Artificial

<220>

<223> Point mutation of amino acid 737 (valin instead of methionin)

<400> 4

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Val Ala Ala Pro Pro Ala Leu Leu Tyr Asp Gly Arg Ala Gly Arg Leu  
35 40 45

Ala Leu Arg Ala Pro Pro Pro Pro Arg Pro Arg Pro Arg Arg Arg Asp  
50 55 60

Ala Gly Val Val Arg Arg Ala Asp Asp Gly Glu Asn Glu Ala Ala Val  
65 70 75 80

Glu Arg Ala Gly Glu Asp Asp Asp Glu Glu Glu Glu Phe Ser Ser Gly  
85 90 95

Ala Trp Gln Pro Pro Arg Ser Arg Arg Gly Gly Val Gly Lys Val Leu  
100 105 110

Lys Arg Arg Gly Thr Val Pro Pro Val Gly Arg Tyr Gly Ser Gly Gly

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Asp Ala Ala Arg Val Arg Gly Ala Ala Ala Pro Ala Pro Ala Pro Thr		
130	135	140
Gln Asp Ala Ala Ser Ser Lys Asn Gly Ala Leu Leu Ser Gly Arg Asp		
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Asp Asp Thr Pro Ala Ser Arg Asn Gly Ser Val Val Thr Gly Ala Asp		
165	170	175
Lys Pro Ala Ala Ala Thr Pro Pro Val Thr Ile Thr Lys Leu Pro Ala		
180	185	190
Pro Asp Ser Pro Val Ile Leu Pro Ser Val Asp Lys Pro Gln Pro Glu		
195	200	205
Phe Val Ile Pro Asp Ala Thr Ala Pro Ala Pro Pro Pro Pro Gly Ser		
210	215	220
Asn Pro Arg Ser Ser Ala Pro Leu Pro Lys Pro Asp Asn Ser Glu Phe		
225	230	235
240		
Ala Glu Asp Lys Ser Ala Lys Val Val Glu Ser Ala Pro Lys Pro Lys		
245	250	255
Ala Thr Arg Ser Ser Pro Ile Pro Ala Val Glu Glu Glu Thr Trp Asp		
260	265	270
Phe Lys Lys Tyr Phe Asp Leu Asn Glu Pro Asp Ala Ala Glu Asp Gly		
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Asp Asp Asp Asp Asp Trp Ala Asp Ser Asp Ala Ser Asp Ser Glu Ile		
290	295	300
Asp Gln Asp Asp Asp Ser Gly Pro Leu Ala Gly Glu Asn Val Met Asn		
305	310	315
320		

Val Ile Val Val Ala Ala Glu Cys Ser Pro Trp Cys Lys Thr Gly Gly  
325 330 335

Leu Gly Asp Val Ala Gly Ala Leu Pro Lys Ala Leu Ala Arg Arg Gly  
340 345 350

His Arg Val Met Val Val Val Pro Arg Tyr Gly Asp Tyr Ala Glu Ala  
355 360 365

Gln Asp Val Gly Ile Arg Lys Tyr Tyr Lys Ala Ala Gly Gln Asp Leu  
370 375 380

Glu Val Lys Tyr Phe His Ala Phe Ile Asp Gly Val Asp Phe Val Phe  
385 390 395 400

Ile Asp Ala Pro Leu Phe Arg His Arg Gln Asp Asp Ile Tyr Gly Gly  
405 410 415

Asn Arg Gln Glu Ile Met Lys Arg Met Ile Leu Phe Cys Lys Ala Ala  
420 425 430

Val Glu Val Pro Trp His Val Pro Cys Gly Gly Val Pro Tyr Gly Asp  
435 440 445

Gly Asn Leu Val Phe Leu Ala Asn Asp Trp His Thr Ala Leu Leu Pro  
450 455 460

Val Tyr Leu Lys Ala Tyr Tyr Arg Asp Asn Gly Met Met Gln Tyr Thr  
465 470 475 480

Arg Ser Val Leu Val Ile His Asn Ile Ala Tyr Gln Gly Arg Gly Pro  
485 490 495

Val Asp Glu Phe Pro Tyr Met Glu Leu Pro Glu His Tyr Leu Asp His  
500 505 510

Phe Lys Leu Tyr Asp Pro Val Gly Gly Glu His Ala Asn Ile Phe Gly

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Ala Gly Leu Lys Met Ala Asp Arg Val Val Thr Val Ser Pro Gly Tyr				
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Leu Trp Glu Leu Lys Thr Thr Glu Gly Gly Trp Gly Leu His Asp Ile				
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Ile Arg Glu Asn Asp Trp Lys Met Asn Gly Ile Val Asn Gly Ile Asp				
		565		570
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Tyr Arg Glu Trp Asn Pro Glu Val Asp Val His Leu Gln Ser Asp Gly				
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Tyr Ala Asn Tyr Thr Val Ala Ser Leu Asp Ser Ser Lys Pro Arg Cys				
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Lys Ala Ala Leu Gln Arg Glu Leu Gly Leu Glu Val Arg Asp Asp Val				
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Pro Leu Ile Gly Phe Ile Gly Arg Leu Asp Gly Gln Lys Gly Val Asp				
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Ile Ile Gly Asp Ala Met Pro Trp Ile Ala Gly Gln Asp Val Gln Leu				
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Val Leu Leu Gly Ser Gly Arg Arg Asp Leu Glu Val Met Leu Gln Arg				
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Phe Glu Ala Gln His Asn Ser Lys Val Arg Gly Trp Val Gly Phe Ser				
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Val Lys Met Ala His Arg Ile Thr Ala Gly Ala Asp Val Leu Val Met				
		690		695
				700
Pro Ser Arg Phe Glu Pro Cys Gly Leu Asn Gln Leu Tyr Ala Met Ala				
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				715
				720

Tyr Gly Thr Val Pro Val Val His Ala Val Gly Gly Leu Arg Asp Thr  
725 730 735

Val Ser Ala Phe Asp Pro Phe Glu Asp Thr Gly Leu Gly Trp Thr Phe  
740 745 750

Asp Arg Ala Glu Pro His Lys Leu Ile Glu Ala Leu Gly His Cys Leu  
755 760 765

Glu Thr Tyr Arg Lys Tyr Lys Glu Ser Trp Arg Gly Leu Gln Val Arg  
770 775 780

Gly Met Ser Gln Asp Leu Ser Trp Asp His Ala Ala Glu Leu Tyr Glu  
785 790 795 800

Glu Val Leu Val Lys Ala Lys Tyr Gln Trp  
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<211> 2400

<212> DNA

<213> Artificial

<220>

<223> Synthetic sequence

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<210> 6  
<211> 799  
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<213> Triticum aestivum

<400> 6

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Pro His Ala Gly Ala Gly Arg Leu His Trp Pro Pro Trp Pro Pro Gln  
35 40 45

Arg Thr Ala Arg Asp Gly Ala Val Ala Ala Leu Ala Ala Gly Lys Lys  
50 55 60

Asp Ala Gly Ile Asp Asp Ala Ala Ala Ser Val Arg Gln Pro Arg Ala  
65 70 75 80

Leu Arg Gly Gly Ala Ala Thr Lys Val Ala Glu Arg Arg Asp Pro Val  
85 90 95

Lys Thr Leu Asp Arg Asp Ala Ala Glu Gly Gly Gly Pro Ser Pro Pro  
100 105 110

Ala Ala Arg Gln Asp Ala Ala Arg Pro Pro Ser Met Asn Gly Met Pro  
115 120 125

Val Asn Gly Glu Asn Lys Ser Thr Gly Gly Gly Gly Ala Thr Lys Asp  
130 135 140

Ser Gly Leu Pro Thr Pro Ala Arg Ala Pro His Pro Ser Thr Gln Asn  
145 150 155 160

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Ile Ser Asp Lys Ala Pro Glu Ser Val Val Pro Ala Glu Lys Thr Pro  
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Pro Ser Ser Gly Ser Asn Phe Glu Ser Ser Ala Ser Ala Pro Gly Ser  
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Asp Thr Val Ser Asp Val Glu Gln Glu Leu Lys Lys Gly Ala Val Val  
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Val Glu Glu Ala Pro Lys Pro Lys Ala Leu Ser Pro Pro Ala Ala Pro  
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Ala Val Gln Glu Asp Leu Trp Asp Phe Lys Lys Tyr Ile Gly Phe Glu  
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Glu Pro Val Glu Ala Lys Asp Asp Gly Arg Ala Val Ala Asp Asp Ala  
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Gly Ser Phe Glu His His Gln Asn His Asp Ser Gly Pro Leu Ala Gly  
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Cys Lys Thr Gly Gly Leu Gly Asp Val Ala Gly Ala Leu Pro Lys Ala  
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Leu Ala Lys Arg Gly His Arg Val Met Val Val Val Pro Arg Tyr Gly  
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Asp Tyr Glu Glu Ala Tyr Asp Val Gly Val Arg Lys Tyr Tyr Lys Ala  
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Ala Gly Gln Asp Met Glu Val Asn Tyr Phe His Ala Tyr Ile Asp Gly  
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Phe Cys Lys Ala Ala Val Glu Val Pro Trp His Val Pro Cys Gly Gly  
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His Tyr Leu Glu His Phe Arg Leu Tyr Asp Pro Val Gly Gly Glu His  
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Gln Lys Gly Val Glu Ile Ile Ala Asp Ala Met Pro Trp Ile Val Ser  
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Gln Asp Val Gln Leu Val Met Leu Gly Thr Gly Arg His Asp Leu Glu  
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Ser Met Leu Gln His Phe Glu Arg Glu His His Asp Lys Val Arg Gly  
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Trp Val Gly Phe Ser Val Arg Leu Ala His Arg Ile Thr Ala Gly Ala  
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Asp Ala Leu Leu Met Pro Ser Arg Phe Glu Pro Cys Gly Leu Asn Gln  
690 695 700

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