

# SEQUENCE LISTING

<110> NOXXON Pharma AG

<120> C5a binding nucleic acid

<130> N 10060 PCT

<150> EP 07018750.5

<151> 2007-09-24

<160> 189

<170> PatentIn version 3.3

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Val	Pro	Lys	Lys	Cys	Cys	Tyr	Asp	Gly	Ala	Arg	Glu	Asn	Lys	Tyr	Glu
			20					25					30		

Thr	Cys	Glu	Gln	Arg	Val	Ala	Arg	Val	Thr	Ile	Gly	Pro	His	Cys	Ile
		35					40					45			

Arg Ala Phe Asn Glu Cys Cys Thr Ile Ala Asp Lys Ile Arg Lys Glu  
 50 55 60

Ser His His Lys Gly Met Leu Leu Gly Arg  
 65 70

<210> 119  
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 <212> PRT  
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<400> 119

Leu Leu Arg Gln Lys Ile Glu Glu Gln Ala Ala Lys Tyr Lys His Ser  
 1 5 10 15

Val Pro Lys Lys Cys Cys Tyr Asp Gly Ala Arg Val Asn Phe Tyr Glu  
 20 25 30

Thr Cys Glu Glu Arg Val Ala Arg Val Thr Ile Gly Pro Leu Cys Ile  
 35 40 45

Arg Ala Phe Asn Glu Cys Cys Thr Ile Ala Asn Lys Ile Arg Lys Glu  
 50 55 60

Ser Pro His Lys Pro Val Gln Leu Gly Arg  
 65 70

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42

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48

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38

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36

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32

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<400> 171

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Val	Val	Lys	Lys	Cys	Cys	Tyr	Asp	Gly	Ala	Cys	Val	Asn	Asn	Asp	Glu
		20						25				30			

Thr	Cys	Glu	Gln	Arg	Ala	Ala	Arg	Ile	Ser	Leu	Gly	Pro	Arg	Cys	Ile
		35					40					45			

Lys	Ala	Phe	Thr	Glu	Cys	Cys	Val	Val	Ala	Ser	Gln	Leu	Arg	Ala	Asn
	50					55					60				

Ile Ser His Lys Asp Met Gln Leu Gly Arg Leu His Met Lys Thr Leu  
65 70 75 80

Leu Pro Val Ser Lys Pro Glu Ile Arg Ser Tyr Phe Pro Glu Ser Trp  
85 90 95

Leu Trp Glu Val His Leu Val Pro Arg Arg Lys Gln Leu Gln Phe Ala  
100 105 110

Leu Pro Asp Ser Leu Thr Thr Trp Glu Ile Gln Gly Ile Gly Ile Ser  
115 120 125

Asn Thr Gly Ile Cys Val Ala Asp Thr Val Lys Ala Lys Val Phe Lys  
130 135 140

Asp Val Phe Leu Glu Met Asn Ile Pro Tyr Ser Val Val Arg Gly Glu  
145 150 155 160

Gln Ile Gln Leu Lys Gly Thr Val Tyr Asn Tyr Arg Thr Ser Gly Met  
165 170 175

Gln Phe Cys Val Lys Met Ser Ala Val Glu Gly Ile Cys Thr Ser Glu  
180 185 190

Ser Pro Val Ile Asp His Gln Gly Thr Lys Ser Ser Lys Cys Val Arg  
195 200 205

Gln Lys Val Glu Gly Ser Ser Ser His Leu Val Thr Phe Thr Val Leu  
210 215 220

Pro Leu Glu Ile Gly Leu His Asn Ile Asn Phe Ser Leu Glu Thr Trp  
225 230 235 240

Phe Gly Lys Glu Ile Leu Val Lys Thr Leu Arg Val Val Pro Glu Gly  
245 250 255

Val Lys Arg Glu Ser Tyr Ser Gly Val Thr Leu Asp Pro Arg Gly Ile  
260 265 270

Tyr Gly Thr Ile Ser Arg Arg Lys Glu Phe Pro Tyr Arg Ile Pro Leu  
275 280 285

Asp Leu Val Pro Lys Thr Glu Ile Lys Arg Ile Leu Ser Val Lys Gly

290		295		300
Leu Leu Val Gly Glu Ile Leu Ser Ala Val Leu Ser Gln Glu Gly Ile				
305		310		315
				320
Asn Ile Leu Thr His Leu Pro Lys Gly Ser Ala Glu Ala Glu Leu Met				
		325		330
				335
Ser Val Val Pro Val Phe Tyr Val Phe His Tyr Leu Glu Thr Gly Asn				
		340		345
				350
His Trp Asn Ile Phe His Ser Asp Pro Leu Ile Glu Lys Gln Lys Leu				
		355		360
				365
Lys Lys Lys Leu Lys Glu Gly Met Leu Ser Ile Met Ser Tyr Arg Asn				
		370		375
				380
Ala Asp Tyr Ser Tyr Ser Val Trp Lys Gly Gly Ser Ala Ser Thr Trp				
		385		390
				395
				400
Leu Thr Ala Phe Ala Leu Arg Val Leu Gly Gln Val Asn Lys Tyr Val				
		405		410
				415
Glu Gln Asn Gln Asn Ser Ile Cys Asn Ser Leu Leu Trp Leu Val Glu				
		420		425
				430
Asn Tyr Gln Leu Asp Asn Gly Ser Phe Lys Glu Asn Ser Gln Tyr Gln				
		435		440
				445
Pro Ile Lys Leu Gln Gly Thr Leu Pro Val Glu Ala Arg Glu Asn Ser				
		450		455
				460
Leu Tyr Leu Thr Ala Phe Thr Val Ile Gly Ile Arg Lys Ala Phe Asp				
		465		470
				475
				480
Ile Cys Pro Leu Val Lys Ile Asp Thr Ala Leu Ile Lys Ala Asp Asn				
		485		490
				495
Phe Leu Leu Glu Asn Thr Leu Pro Ala Gln Ser Thr Phe Thr Leu Ala				
		500		505
				510
Ile Ser Ala Tyr Ala Leu Ser Leu Gly Asp Lys Thr His Pro Gln Phe				
		515		520
				525

Arg Ser Ile Val Ser Ala Leu Lys Arg Glu Ala Leu Val Lys Gly Asn  
 530 535 540

Pro Pro Ile Tyr Arg Phe Trp Lys Asp Asn Leu Gln His Lys Asp Ser  
 545 550 555 560

Ser Val Pro Asn Thr Gly Thr Ala Arg Met Val Glu Thr Thr Ala Tyr  
 565 570 575

Ala Leu Leu Thr Ser Leu Asn Leu Lys Asp Ile Asn Tyr Val Asn Pro  
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Val Ile Lys Trp Leu Ser Glu Glu Gln Arg Tyr Gly Gly Gly Phe Tyr  
 595 600 605

Ser Thr Gln Asp Thr Ile Asn Ala Ile Glu Gly Leu Thr Glu Tyr Ser  
 610 615 620

Leu Leu Val Lys Gln Leu Arg Leu Ser Met Asp Ile Asp Val Ser Tyr  
 625 630 635 640

Lys His Lys Gly Ala Leu His Asn Tyr Lys Met Thr Asp Lys Asn Phe  
 645 650 655

Leu Gly Arg Pro Val Glu Val Leu Leu Asn Asp Asp Leu Ile Val Ser  
 660 665 670

Thr Gly Phe Gly Ser Gly Leu Ala Thr Val His Val Thr Thr Val Val  
 675 680 685

His Lys Thr Ser Thr Ser Glu Glu Val Cys Ser Phe Tyr Leu Lys Ile  
 690 695 700

Asp Thr Gln Asp Ile Glu Ala Ser His Tyr Arg Gly Tyr Gly Asn Ser  
 705 710 715 720

Asp Tyr Lys Arg Ile Val Ala Cys Ala Ser Tyr Lys Pro Ser Arg Glu  
 725 730 735

Glu Ser Ser Ser Gly Ser Ser His Ala Val Met Asp Ile Ser Leu Pro  
 740 745 750

Thr Gly Ile Ser Ala Asn Glu Glu Asp Leu Lys Ala Leu Val Glu Gly  
755 760 765

Val Asp Gln Leu Phe Thr Asp Tyr Gln Ile Lys Asp Gly His Val Ile  
770 775 780

Leu Gln Leu Asn Ser Ile Pro Ser Ser Asp Phe Leu Cys Val Arg Phe  
785 790 795 800

Arg Ile Phe Glu Leu Phe Glu Val Gly Phe Leu Ser Pro Ala Thr Phe  
805 810 815

Thr Val Tyr Glu Tyr His Arg Pro Asp Lys Gln Cys Thr Met Phe Tyr  
820 825 830

Ser Thr Ser Asn Ile Lys Ile Gln Lys Val Cys Glu Gly Ala Ala Cys  
835 840 845

Lys Cys Val Glu Ala Asp Cys Gly Gln Met Gln Glu Glu Leu Asp Leu  
850 855 860

Thr Ile Ser Ala Glu Thr Arg Lys Gln Thr Ala Cys Lys Pro Glu Ile  
865 870 875 880

Ala Tyr Ala Tyr Lys Val Ser Ile Thr Ser Ile Thr Val Glu Asn Val  
885 890 895

Phe Val Lys Tyr Lys Ala Thr Leu Leu Asp Ile Tyr Lys Thr Gly Glu  
900 905 910

Ala Val Ala Glu Lys Asp Ser Glu Ile Thr Phe Ile Lys Lys Val Thr  
915 920 925

Cys Thr Asn Ala Glu Leu Val Lys Gly Arg Gln Tyr Leu Ile Met Gly  
930 935 940

Lys Glu Ala Leu Gln Ile Lys Tyr Asn Phe Ser Phe Arg Tyr Ile Tyr  
945 950 955 960

Pro Leu Asp Ser Leu Thr Trp Ile Glu Tyr Trp Pro Arg Asp Thr Thr  
965 970 975

Cys Ser Ser Cys Gln Ala Phe Leu Ala Asn Leu Asp Glu Phe Ala Glu  
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Asp Ile Phe Leu Asn Gly Cys  
           995

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Gln Glu Gln Thr Tyr Val Ile Ser Ala Pro Lys Ile Phe Arg Val Gly  
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Ala Ser Glu Asn Ile Val Ile Gln Val Tyr Gly Tyr Thr Glu Ala Phe  
                   20                  25                  30

Asp Ala Thr Ile Ser Ile Lys Ser Tyr Pro Asp Lys Lys Phe Ser Tyr  
           35                  40                  45

Ser Ser Gly His Val His Leu Ser Ser Glu Asn Lys Phe Gln Asn Ser  
           50                  55                  60

Ala Ile Leu Thr Ile Gln Pro Lys Gln Leu Pro Gly Gly Gln Asn Pro  
 65                  70                  75                  80

Val Ser Tyr Val Tyr Leu Glu Val Val Ser Lys His Phe Ser Lys Ser  
                   85                  90                  95

Lys Arg Met Pro Ile Thr Tyr Asp Asn Gly Phe Leu Phe Ile His Thr  
                   100                  105                  110

Asp Lys Pro Val Tyr Thr Pro Asp Gln Ser Val Lys Val Arg Val Tyr  
           115                  120                  125

Ser Leu Asn Asp Asp Leu Lys Pro Ala Lys Arg Glu Thr Val Leu Thr  
           130                  135                  140

Phe Ile Asp Pro Glu Gly Ser Glu Val Asp Met Val Glu Glu Ile Asp  
 145                  150                  155                  160

His Ile Gly Ile Ile Ser Phe Pro Asp Phe Lys Ile Pro Ser Asn Pro  
                   165                  170                  175

Arg Tyr Gly Met Trp Thr Ile Lys Ala Lys Tyr Lys Glu Asp Phe Ser  
 180 185 190

Thr Thr Gly Thr Ala Tyr Phe Glu Val Lys Glu Tyr Val Leu Pro His  
 195 200 205

Phe Ser Val Ser Ile Glu Pro Glu Tyr Asn Phe Ile Gly Tyr Lys Asn  
 210 215 220

Phe Lys Asn Phe Glu Ile Thr Ile Lys Ala Arg Tyr Phe Tyr Asn Lys  
 225 230 235 240

Val Val Thr Glu Ala Asp Val Tyr Ile Thr Phe Gly Ile Arg Glu Asp  
 245 250 255

Leu Lys Asp Asp Gln Lys Glu Met Met Gln Thr Ala Met Gln Asn Thr  
 260 265 270

Met Leu Ile Asn Gly Ile Ala Gln Val Thr Phe Asp Ser Glu Thr Ala  
 275 280 285

Val Lys Glu Leu Ser Tyr Tyr Ser Leu Glu Asp Leu Asn Asn Lys Tyr  
 290 295 300

Leu Tyr Ile Ala Val Thr Val Ile Glu Ser Thr Gly Gly Phe Ser Glu  
 305 310 315 320

Glu Ala Glu Ile Pro Gly Ile Lys Tyr Val Leu Ser Pro Tyr Lys Leu  
 325 330 335

Asn Leu Val Ala Thr Pro Leu Phe Leu Lys Pro Gly Ile Pro Tyr Pro  
 340 345 350

Ile Lys Val Gln Val Lys Asp Ser Leu Asp Gln Leu Val Gly Gly Val  
 355 360 365

Pro Val Ile Leu Asn Ala Gln Thr Ile Asp Val Asn Gln Glu Thr Ser  
 370 375 380

Asp Leu Asp Pro Ser Lys Ser Val Thr Arg Val Asp Asp Gly Val Ala  
 385 390 395 400

Ser Phe Val Leu Asn Leu Pro Ser Gly Val Thr Val Leu Glu Phe Asn  
 405 410 415

Val Lys Thr Asp Ala Pro Asp Leu Pro Glu Glu Asn Gln Ala Arg Glu  
 420 425 430

Gly Tyr Arg Ala Ile Ala Tyr Ser Ser Leu Ser Gln Ser Tyr Leu Tyr  
 435 440 445

Ile Asp Trp Thr Asp Asn His Lys Ala Leu Leu Val Gly Glu His Leu  
 450 455 460

Asn Ile Ile Val Thr Pro Lys Ser Pro Tyr Ile Asp Lys Ile Thr His  
 465 470 475 480

Tyr Asn Tyr Leu Ile Leu Ser Lys Gly Lys Ile Ile His Phe Gly Thr  
 485 490 495

Arg Glu Lys Phe Ser Asp Ala Ser Tyr Gln Ser Ile Asn Ile Pro Val  
 500 505 510

Thr Gln Asn Met Val Pro Ser Ser Arg Leu Leu Val Tyr Tyr Ile Val  
 515 520 525

Thr Gly Glu Gln Thr Ala Glu Leu Val Ser Asp Ser Val Trp Leu Asn  
 530 535 540

Ile Glu Glu Lys Cys Gly Asn Gln Leu Gln Val His Leu Ser Pro Asp  
 545 550 555 560

Ala Asp Ala Tyr Ser Pro Gly Gln Thr Val Ser Leu Asn Met Ala Thr  
 565 570 575

Gly Met Asp Ser Trp Val Ala Leu Ala Ala Val Asp Ser Ala Val Tyr  
 580 585 590

Gly Val Gln Arg Gly Ala Lys Lys Pro Leu Glu Arg Val Phe Gln Phe  
 595 600 605

Leu Glu Lys Ser Asp Leu Gly Cys Gly Ala Gly Gly Gly Leu Asn Asn  
 610 615 620



Ala Asn Val Phe His Leu Ala Gly Leu Thr Phe Leu Thr Asn Ala Asn  
 625 630 635 640

Ala Asp Asp Ser Gln Glu Asn Asp Glu Pro Cys Lys Glu Ile Leu  
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22

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25

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Val Val Lys Lys Cys Cys Tyr Asp Gly Val Arg Ile Asn His Asp Glu  
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Thr Cys Glu Gln Arg Ala Ala Arg Ile Ser Val Gly Pro Arg Cys Val  
 35 40 45

Lys Ala Phe Thr Glu Cys Cys Val Val Ala Ser Gln Leu Arg Ala Asn  
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Asn Ser His Lys Asp Leu Gln Leu Gly Arg  
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