

# SEQUENCE LISTING

<110> FUNDAÇÃO BUTANTAN  
CRISTÁLIA PRODUTOS QUÍMICOS FARMACÊUTICOS LTDA.

<120> POLYNUCLEOTIDE, POLYPEPTIDE WITH IMMUNOSUPPRESSIVE ACTIVITY, EXPRESSION CASSETTE, EXPRESSION VECTOR, HOST CELL, PHARMACEUTICAL COMPOSITION, METHODS FOR PRODUCING A POLYPEPTIDE WITH IMMUNOSUPPRESSIVE ACTIVITY AND FOR PREVENTING OR TREATING CONDITIONS THAT REQUIRE IMMUNOSUPPRESSION AND USE OF A POLYPEPTIDE.

<130> "Imunossupressor"

<140>

<141>

<150>

<151>

<160> 22

<210> 1

<211> 600

<212> DNA

<213> Artificial sequence

<220> CDS

<222> (1)..(600)

<223> Lachesis muta cDNA

<400> 1

ttc tca cag aaa tac att gaa ctt gtt gta gtt gca gat cac gga atg	48
Phe Ser Gln Lys Tyr Ile Glu Leu Val Val Val Ala Asp His Gly Met	
1 5 10 15	
ttc acg aaa tac aat ggc aat tta aat act ata aga aca cgg gta cat	96
Phe Thr Lys Tyr Asn Gly Asn Leu Asn Thr Ile Arg Thr Arg Val His	
20 25 30	
gaa att gtc aac act cta aat ggg ttt tac aga tct ttg aat att cat	144
Glu Ile Val Asn Thr Leu Asn Gly Phe Tyr Arg Ser Leu Asn Ile His	
35 40 45	
atc tca ctg act gac cta gaa att tgg tcc aac caa gat ttg atc aac	192
Ile Ser Leu Thr Asp Leu Glu Ile Trp Ser Asn Gln Asp Leu Ile Asn	
50 55 60	
gtg cag tca gca gcg gct gat act ttg aaa aca ttt gga gag tgg aga	240
Val Gln Ser Ala Ala Ala Asp Thr Leu Lys Thr Phe Gly Glu Trp Arg	
65 70 75 80	
gag aga gtc ttg ctg aat cgc ata agt cat gat aat gct cag tta ctc	288
Glu Arg Val Leu Leu Asn Arg Ile Ser His Asp Asn Ala Gln Leu Leu	
85 90 95	
acg gcc att gac ctt gct gat aat act ata gga ata gct tac aca ggc	336
Thr Ala Ile Asp Leu Ala Asp Asn Thr Ile Gly Ile Ala Tyr Thr Gly	
100 105 110	
ggc atg tgc tac ccg aag aat tct gta gga att gtt cag gat cat agt	384
Gly Met Cys Tyr Pro Lys Asn Ser Val Gly Ile Val Gln Asp His Ser	
115 120 125	
cca aaa act ctt ttg att gca gtt aca atg gcc cat gag ctg ggt cat	432

Pro	Lys	Thr	Leu	Leu	Ile	Ala	Val	Thr	Met	Ala	His	Glu	Leu	Gly	His	
130						135					140					
aat	ctg	ggc	atg	aag	cat	gat	gaa	aat	cat	tgt	cat	tgc	agt	gct	tcc	480
Asn	Leu	Gly	Met	Lys	His	Asp	Glu	Asn	His	Cys	His	Cys	Ser	Ala	Ser	
145					150					155					160	
ttc	tgc	att	atg	cct	ccc	agt	tta	agt	gaa	gga	cct	tcc	tat	gag	ttc	528
Phe	Cys	Ile	Met	Pro	Pro	Ser	Leu	Ser	Glu	Gly	Pro	Ser	Tyr	Glu	Phe	
				165					170					175		
agc	gat	tgt	agt	aag	gat	tat	tat	gag	atg	ttt	ctt	act	aag	cga	aag	576
Ser	Asp	Cys	Ser	Lys	Asp	Tyr	Tyr	Glu	Met	Phe	Leu	Thr	Lys	Arg	Lys	
			180					185					190			
cca	caa	tgc	atc	ctg	aac	aag	cca									600
Pro	Gln	Cys	Ile	Leu	Asn	Lys	Pro									
		195				200										

<210> 2  
 <211> 200  
 <212> PTN  
 <213> Artificial sequence

<220>  
 <223> Recombinant polypeptide

<400> 2

Phe	Ser	Gln	Lys	Tyr	Ile	Glu	Leu	Val	Val	Val	Ala	Asp	His	Gly	Met	
1				5				10						15		
Phe	Thr	Lys	Tyr	Asn	Gly	Asn	Leu	Asn	Thr	Ile	Arg	Thr	Arg	Val	His	
		20					25						30			
Glu	Ile	Val	Asn	Thr	Leu	Asn	Gly	Phe	Tyr	Arg	Ser	Leu	Asn	Ile	His	
		35					40					45				
Ile	Ser	Leu	Thr	Asp	Leu	Glu	Ile	Trp	Ser	Asn	Gln	Asp	Leu	Ile	Asn	
	50					55					60					
Val	Gln	Ser	Ala	Ala	Ala	Asp	Thr	Leu	Lys	Thr	Phe	Gly	Glu	Trp	Arg	
65					70					75					80	
Glu	Arg	Val	Leu	Leu	Asn	Arg	Ile	Ser	His	Asp	Asn	Ala	Gln	Leu	Leu	
				85					90					95		
Thr	Ala	Ile	Asp	Leu	Ala	Asp	Asn	Thr	Ile	Gly	Ile	Ala	Tyr	Thr	Gly	
		100					105						110			
Gly	Met	Cys	Tyr	Pro	Lys	Asn	Ser	Val	Gly	Ile	Val	Gln	Asp	His	Ser	
	115						120					125				
Pro	Lys	Thr	Leu	Leu	Ile	Ala	Val	Thr	Met	Ala	His	Glu	Leu	Gly	His	
	130					135					140					
Asn	Leu	Gly	Met	Lys	His	Asp	Glu	Asn	His	Cys	His	Cys	Ser	Ala	Ser	
145					150					155					160	
Phe	Cys	Ile	Met	Pro	Pro	Ser	Leu	Ser	Glu	Gly	Pro	Ser	Tyr	Glu	Phe	
				165					170					175		
Ser	Asp	Cys	Ser	Lys	Asp	Tyr	Tyr	Glu	Met	Phe	Leu	Thr	Lys	Arg	Lys	
			180					185					190			

Pro Gln Cys Ile Leu Asn Lys Pro  
195 200

<210> 3

<211> 267

<212> PTN

<213> Artificial sequence

<220>

<223> Recombinant polypeptide

<400> 3

Met Arg Gly Ser His His His His His His Gly Met Ala Ser Met Thr  
1 5 10 15

Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp  
20 25 30

Arg Trp Gly Ser Glu Leu Phe Ser Gln Lys Tyr Ile Glu Leu Val Val  
35 40 45

Val Ala Asp His Gly Met Phe Thr Lys Tyr Asn Gly Asn Leu Asn Thr  
50 55 60

Ile Arg Thr Arg Val His Glu Ile Val Asn Thr Leu Asn Gly Phe Tyr  
65 70 75 80

Arg Ser Leu Asn Ile His Ile Ser Leu Thr Asp Leu Glu Ile Trp Ser  
85 90 95

Asn Gln Asp Leu Ile Asn Val Gln Ser Ala Ala Ala Asp Thr Leu Lys  
100 105 110

Thr Phe Gly Glu Trp Arg Glu Arg Val Leu Leu Asn Arg Ile Ser His  
115 120 125

Asp Asn Ala Gln Leu Leu Thr Ala Ile Asp Leu Ala Asp Asn Thr Ile  
130 135 140

Gly Ile Ala Tyr Thr Gly Gly Met Cys Tyr Pro Lys Asn Ser Val Gly  
145 150 155 160

Ile Val Gln Asp His Ser Pro Lys Thr Leu Leu Ile Ala Val Thr Met  
165 170 175

Ala His Glu Leu Gly His Asn Leu Gly Met Lys His Asp Glu Asn His  
180 185 190

Cys His Cys Ser Ala Ser Phe Cys Ile Met Pro Pro Ser Leu Ser Glu  
195 200 205

Gly Pro Ser Tyr Glu Phe Ser Asp Cys Ser Lys Asp Tyr Tyr Glu Met  
210 215 220

Phe Leu Thr Lys Arg Lys Pro Gln Cys Ile Leu Asn Lys Pro Trp Tyr  
225 230 235 240

His Gly Ile Arg Ser Leu Ile Arg Leu Leu Thr Lys Pro Glu Arg Lys  
245 250 255

Leu Ser Trp Leu Leu Pro Pro Leu Ser Asn Asn  
260 265

<210> 4  
<211> 8  
<212> PTN  
<213> Artificial sequence

<220> PEPTIDE

<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 4  
His Asp Asn Ala Gln Leu Leu Thr  
1 5

<210> 5  
<211> 16  
<212> PTN  
<213> Artificial sequence

<220>

<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 5  
Ala Ile Asp Leu Ala Asp Asn Thr Ile Gly Ile Ala Tyr Thr Gly Gly  
1 5 10 15

<210> 6  
<211> 8  
<212> PTN  
<213> Artificial sequence

<220>

<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 6  
Gln Leu Leu Thr Ala Ile Asp Leu  
1 5

<210> 7  
<211> 8  
<212> PTN  
<213> Artificial sequence

<220>

<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 7  
Ala Asp Asn Thr Ile Gly Ile Ala  
1 5

<210> 8  
<211> 8  
<212> PTN  
<213> Artificial sequence

<220>

<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 8

Ile Gly Ile Ala Tyr Thr Gly Gly  
1 5

<210> 9  
<211> 9  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 9  
Asn Ala Gln Leu Leu Thr Ala Ile Asp  
1 5

<210> 10  
<211> 8  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 10  
Tyr Thr Gly Gly Met Cys Tyr Pro  
1 5

<210> 11  
<211> 5  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 11  
Leu Thr Ala Ile Asp  
1 5

<210> 12  
<211> 5  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 12  
Ala Ile Asp Leu Ala  
1 5

<210> 13  
<211> 7  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 13  
Leu Thr Ala Ile Asp Leu Ala  
1 5

<210> 14  
<211> 3  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 14  
Ala Ile Asp  
1

<210> 15  
<211> 29  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence from the sequence of SEQ ID NO: 2

<400> 15  
Leu Asn Arg Ile Ser His Asp Asn Ala Gln Leu Leu Thr Ala Ile Asp  
1 5 10 15

Leu Ala Asp Asn Thr Ile Gly Ile Ala Tyr Thr Gly Gly  
20 25

<210> 16  
<211> 24  
<212> DNA  
<213> Artificial sequence

<220>  
<223> degenerated oligonucleotide ("sense primer")

<400> 16  
ttctcmsara aatacatyga actg 24

<210> 17  
<211> 21  
<212> DNA  
<213> Artificial sequence

<220>  
<223> degenerated oligonucleotide ("antisense primer")

<400> 17  
wggyttrttc aggatrcatt g 21

<210> 18  
<211> 31  
<212> DNA  
<213> Artificial sequence

<220>  
<223> sense oligonucleotide for the SEQ ID NO: 2 coding nucleotide sequence  
having the restriction site Xho-I at 5' end

<400> 18  
ctcgagttct cccagaaata cattgaactg g 31

<210> 19  
<211> 21  
<212> DNA  
<213> Artificial sequence

<220>  
<223> sense oligonucleotide for the SEQ ID NO: 2 coding nucleotide sequence  
having the restriction site Nco-I at 3' end

<400> 19  
atcctgaaca aacctccatg g 21

<210> 20  
<211> 20  
<212> DNA  
<213> Artificial sequence

<220>  
<223> sense oligonucleotide for the T7 polymerase promoter coding nucleotide  
sequence

<400> 20  
taatacgact cactataggg 20

<210> 21  
<211> 20  
<212> DNA  
<213> Artificial sequence

<220>  
<223> antisense oligonucleotide for the SP6 polymerase coding nucleotide  
sequence

<400> 21  
ttctatagtg tcacctaaat 20

<210> 22  
<211> 14  
<212> PTN  
<213> Artificial sequence

<220>  
<223> NH2-COOH terminal peptide sequence

<400> 22  
Ser Asn Gln Asp Leu Ile Asn Val Gln Ser Arg Arg Arg Asp  
1 5 10