

060275-0500-01PC00-Sequence-Listing
SEQUENCE LISTING

<110> OncoImmune, Inc.
Liu, Yang
Zheng, Pan

<120> USE OF CD24 FOR LOWERING LOW-DENSITY LIPOPROTEIN CHOLESTEROL
LEVELS

<130> 060275.0500.01PC00

<150> 62158157

<151> 2015-05-07

<160> 12

<170> PatentIn version 3.5

<210> 1

<211> 31

<212> PRT

<213> Homo sapiens

<220>

<221> X

<222> (31)..(31)

<223> Valine or Alanine

<400> 1

Ser Glu Thr Thr Thr Gly Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser
1 5 10 15

Asn Ser Gly Leu Ala Pro Asn Pro Thr Asn Ala Thr Thr Lys Xaa
20 25 30

<210> 2

<211> 30

<212> PRT

<213> Homo sapiens

<400> 2

Ser Glu Thr Thr Thr Gly Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser
1 5 10 15

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Asn Ser Gly Leu Ala Pro Asn Pro Thr Asn Ala Thr Thr Lys
 20 25 30

<210> 3
 <211> 27
 <212> PRT
 <213> Mus musculus

<400> 3

Asn Gln Thr Ser Val Ala Pro Phe Pro Gly Asn Gln Asn Ile Ser Ala
 1 5 10 15

Ser Pro Asn Pro Thr Asn Ala Thr Thr Arg Gly
 20 25

<210> 4
 <211> 26
 <212> PRT
 <213> Homo sapiens

<400> 4

Met Gly Arg Ala Met Val Ala Arg Leu Gly Leu Gly Leu Leu Leu Leu
 1 5 10 15

Ala Leu Leu Leu Pro Thr Gln Ile Tyr Ser
 20 25

<210> 5
 <211> 287
 <212> PRT
 <213> Artificial

<220>
 <223> Fusion protein

<400> 5

Met Gly Arg Ala Met Val Ala Arg Leu Gly Leu Gly Leu Leu Leu Leu
 1 5 10 15

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Ala Leu Leu Leu Pro Thr Gln Ile Tyr Ser Ser Glu Thr Thr Thr Gly
20 25 30

Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser Asn Ser Gly Leu Ala Pro
35 40 45

Asn Pro Thr Asn Ala Thr Thr Lys Pro Lys Ser Cys Asp Lys Thr His
50 55 60

Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val
65 70 75 80

Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr
85 90 95

Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu
100 105 110

Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys
115 120 125

Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser
130 135 140

Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys
145 150 155 160

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile
165 170 175

Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro
180 185 190

Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu
195 200 205

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

Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser
225 230 235 240

Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg
245 250 255

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu
260 265 270

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
275 280 285

<210> 6
<211> 261
<212> PRT
<213> Artificial

<220>
<223> Fusion protein

<400> 6

Ser Glu Thr Thr Thr Gly Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser
1 5 10 15

Asn Ser Gly Leu Ala Pro Asn Pro Thr Asn Ala Thr Thr Lys Pro Lys
20 25 30

Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
35 40 45

Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
50 55 60

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Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
65 70 75 80

Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
85 90 95

Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
100 105 110

Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
115 120 125

Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
130 135 140

Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
145 150 155 160

Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
165 170 175

Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
180 185 190

Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
195 200 205

Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
210 215 220

Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
225 230 235 240

Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
245 250 255

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Leu Ser Pro Gly Lys
260

<210> 7
<211> 231
<212> PRT
<213> Homo sapiens

<400> 7

Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro
1 5 10 15

Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
20 25 30

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
35 40 45

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
50 55 60

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
65 70 75 80

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
85 90 95

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
100 105 110

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
115 120 125

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys
130 135 140

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp

145 150 155 160

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
180 185 190

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
195 200 205

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
210 215 220

Leu Ser Leu Ser Pro Gly Lys
225 230

<210>	8
<211>	288
<212>	PRT
<213>	Artificial

<220>
<223> Fusion protein

<400> 8

Met Gly Arg Ala Met Val Ala Arg Leu Gly Leu Gly Leu Leu Leu Leu
1 5 10 15

Ala Leu Leu Leu Pro Thr Gln Ile Tyr Ser Ser Glu Thr Thr Thr Gly
20 25 30

Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser Asn Ser Gly Leu Ala Pro
35 40 45

Asn Pro Thr Asn Ala Thr Thr Lys Val Pro Lys Ser Cys Asp Lys Thr
50 55 60

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His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
65 70 75 80

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
85 90 95

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
100 105 110

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala
115 120 125

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
130 135 140

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
145 150 155 160

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
165 170 175

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
180 185 190

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
195 200 205

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
210 215 220

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
225 230 235 240

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
245 250 255

060275-0500-01PC00-Sequence-Listing

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
260 265 270

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
275 280 285

<210> 9

<211> 288

<212> PRT

<213> Artificial

<220>

<223> Fusion protein

<400> 9

Met Gly Arg Ala Met Val Ala Arg Leu Gly Leu Gly Leu Leu Leu Leu
1 5 10 15

Ala Leu Leu Leu Pro Thr Gln Ile Tyr Ser Ser Glu Thr Thr Thr Gly
20 25 30

Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser Asn Ser Gly Leu Ala Pro
35 40 45

Asn Pro Thr Asn Ala Thr Thr Lys Ala Pro Lys Ser Cys Asp Lys Thr
50 55 60

His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser
65 70 75 80

Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg
85 90 95

Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro
100 105 110

Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala

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115

120

125

Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val
130 135 140

Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr
145 150 155 160

Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr
165 170 175

Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu
180 185 190

Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys
195 200 205

Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser
210 215 220

Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp
225 230 235 240

Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser
245 250 255

Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala
260 265 270

Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
275 280 285

<210> 10

<211> 29

<212> PRT

<213> Macaca fascicularis

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<400> 10

Thr Val Thr Thr Ser Ala Pro Leu Ser Ser Asn Ser Pro Gln Asn Thr
1 5 10 15

Ser Thr Thr Pro Asn Pro Ala Asn Thr Thr Thr Lys Ala
20 25

<210> 11

<211> 262

<212> PRT

<213> Artificial

<220>

<223> Fusion protein

<400> 11

Ser Glu Thr Thr Thr Gly Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser
1 5 10 15

Asn Ser Gly Leu Ala Pro Asn Pro Thr Asn Ala Thr Thr Lys Val Pro
20 25 30

Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

060275-0500-01PC00-Sequence-Listing

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
 115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
 130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
 145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
 165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
 180 185 190

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
 210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
 225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 245 250 255

Ser Leu Ser Pro Gly Lys
 260

<210> 12
 <211> 262
 <212> PRT
 <213> Artificial

<220>
 <223> Fusion protein

060275-0500-01PC00-Sequence-Listing

<400> 12

Ser Glu Thr Thr Thr Gly Thr Ser Ser Asn Ser Ser Gln Ser Thr Ser
1 5 10 15

Asn Ser Gly Leu Ala Pro Asn Pro Thr Asn Ala Thr Thr Lys Ala Pro
20 25 30

Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
35 40 45

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
50 55 60

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
65 70 75 80

Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
85 90 95

Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
100 105 110

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp
115 120 125

Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
130 135 140

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
145 150 155 160

Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
165 170 175

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
180 185 190

060275-0500-01PC00-Sequence-Listing

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 195 200 205

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
 210 215 220

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
 225 230 235 240

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 245 250 255

Ser Leu Ser Pro Gly Lys
 260