

30-11-2017 ATL-B-0006-PCT1 (1)_ST25
SEQUENCE LISTING

<110> OGD2 PHARMA
Université de Nantes
Centre National de la Recherche Scientifique (CNRS)
Institut national de la santé et de la recherche médicale
(INSERM)
Institut de Cancérologie de l'Ouest (ICO)

<120> USE OF ANTIBODY AGAINST O-ACETYLATED GD2 GANGLIOSIDE TO IMPROVE
THE THERAPEUTIC POTENTIAL OF DRUGS

<130> ATL-B-0006-PCT1

<150> EP16002576.3
<151> 2016-12-05

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<170> PatentIn version 3.5

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 35 40 45

Pro Xaa Xaa Leu Ile Tyr Xaa Xaa Ser Xaa Arg Xaa Xaa Gly Xaa Pro
 50 55 60

Xaa Arg Phe Ser Gly Ser Gly Ser Gly Thr Xaa Phe Thr Leu Xaa Ile
 65 70 75 80

Xaa Xaa Xaa Xaa Xaa Glu Asp Xaa Xaa Xaa Tyr Xaa Cys Xaa Gln Xaa
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Tyr Met Xaa Trp Xaa Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Xaa
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Xaa Xaa Xaa Arg Asn Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa Tyr Xaa Xaa
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Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Xaa Xaa Lys Xaa Xaa
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Xaa Tyr Leu Gln Met Asn Ser Leu Xaa Xaa Glu Asp Thr Ala Xaa Tyr
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Thr Xaa Xaa Thr Val Ser Ser
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Xaa Xaa Asn Thr Xaa Leu His Trp Xaa Xaa Gln Xaa Pro Gly Xaa Xaa
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Pro Xaa Xaa Leu Ile Tyr Lys Val Ser Asn Arg Leu Xaa Gly Xaa Pro
50 55 60

Xaa Arg Phe Ser Gly Ser Gly Ser Gly Thr Xaa Phe Thr Leu Xaa Ile
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Gln Ala Asn Thr Tyr Leu His Trp Phe Gln Gln Arg Pro Gly Gln Ser
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Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Ser Gly Val Pro
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Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
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Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Thr Gly Ile Pro
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Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
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Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Thr Gly Ile Pro
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Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
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Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Thr Gly Ile Pro
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Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
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Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Xaa Lys Xaa Xaa
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Xaa Tyr Leu Gln Met Asn Ser Leu Xaa Xaa Glu Asp Thr Ala Xaa Tyr
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Gly Phe Ile Arg Asn Arg Ala Asn Ala Tyr Thr Thr Glu Tyr Ala Ala
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Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

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<400> 10

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

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Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Ala Tyr Thr Thr Glu Tyr Ala Ala
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

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<220>
<223> OGD201 VH21

<400> 11

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Thr Ala Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Ala Tyr Thr Thr Glu Tyr Ala Ala
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ser Ile
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 12

<211> 112
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 <220>
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 <223> X = D or E

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 <223> X = V or Q

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 <223> X = S or T

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<223> X = L or Q

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<223> X = K or R

<220>
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<223> X = Q or K

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<221> MISC_FEATURE

<222> (84)..(84)

<223> X = E or Q

<220>

<221> MISC_FEATURE

<222> (85)..(85)

<223> X = A or P

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<221> MISC_FEATURE

<222> (88)..(88)

<223> X = L or V or F

<220>

<221> MISC_FEATURE

<222> (89)..(89)

<223> X = G or A

<220>

<221> MISC_FEATURE

<222> (90)..(90)

<223> X = V or T

<220>

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<222> (92)..(92)

<223> X = Y or F

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<223> X = G or Q

<400> 12

Xaa Val Xaa Met Thr Gln Ser Pro Xaa Xaa Leu Xaa Xaa Xaa Xaa Gly
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Cys Arg Ser Ser Gln Ser Leu Leu Lys Asn
20 25 30

Asn Gly Asn Thr Phe Leu His Trp Tyr Xaa Gln Xaa Pro Gly Xaa Xaa
35 40 45

Pro Xaa Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Xaa Gly Xaa Pro
50 55 60

Xaa Arg Phe Ser Gly Ser Gly Ser Gly Thr Xaa Phe Thr Leu Xaa Ile
65 70 75 80

Ser Xaa Xaa Xaa Xaa Glu Asp Xaa Xaa Xaa Tyr Xaa Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Xaa Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 13

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<211> 119
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<220>
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<220>
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<222> (16)..(16)
<223> X = G or R

<220>
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<222> (23)..(23)
<223> X = A or T

<220>
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<223> X = S or A

<220>
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<223> X = S or N

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<222> (80)..(80)
<223> X = I or S

<220>
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<223> X = R or K

<220>
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<223> X = T or A

<400> 13

Xaa Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Xaa Pro Gly Xaa
1 5 10 15

Ser Leu Arg Leu Ser Cys Xaa Thr Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
Pge p

50

55

60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Xaa Lys Xaa Xaa
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Xaa Xaa Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Leu Thr Val Ser Ser
115

<210> 14
<211> 112
<212> PRT
<213> Mus musculus

<400> 14

Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Lys Asn
20 25 30

Asn Gly Asn Thr Phe Leu His Trp Tyr Leu Gln Lys Ser Gly Gln Ser
35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Tyr Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 15
<211> 119
<212> PRT
<213> Mus musculus

<400> 15

Glu Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Leu Pro Gly Asp
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Thr Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

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Tyr Met Thr Trp Val Arg Gln Pro Pro Arg Lys Ala Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Gln Ser Ile
65 70 75 80

Leu Tyr Leu Gln Met Asn Thr Leu Arg Thr Glu Asp Ser Ala Thr Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Thr Leu Thr Val Ser Ser
115

<210> 16
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<220>
<223> CDR1_VH

<400> 16

Glu Phe Thr Phe Thr Asp Tyr Tyr Met Thr
1 5 10

<210> 17
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR2_VH

<400> 17

Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro Ser
1 5 10 15

Val Lys Gly

<210> 18
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR3_VH

<400> 18

Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr

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1 5 10

<210> 19
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR1_VL

<400> 19

Arg Ser Ser Gln Ser Leu Leu Lys Asn Asn Gly Asn Thr Phe Leu His
 1 5 10 15

<210> 20
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR2_VL

<400> 20

Tyr Lys Val Ser Asn Arg Leu
 1 5

<210> 21
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
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<400> 21

Ser Gln Ser Thr His Ile Pro Tyr Thr
 1 5

<210> 22
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<400> 22

Gly Ser Gly Gly Ser
 1 5

<210> 23
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<220>
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<400> 23

Gly Gly Gly Ser
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<210> 24
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
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<400> 24

Gly Gly Gly Gly Ser
1 5

<210> 25
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> ((G4S)3 linker

<400> 25

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 26
<211> 18
<212> PRT
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<220>
<223> CD19 linker

<400> 26

Gly Ser Thr Ser Gly Ser Gly Lys Pro Gly Ser Gly Glu Gly Ser Thr
1 5 10 15

Lys Gly

<210> 27
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> 18mer

<400> 27

Gly Gly Ser Ser Arg Ser Ser Ser Ser Gly Gly Gly Gly Ser Gly Gly
1 5 10 15

Gly Gly

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<210> 28
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> (G4S)4 linker

<400> 28

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser
20

<210> 29
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> linker

<400> 29

Lys Glu Ser Gly Ser Val Ser Ser Glu Gln Leu Ala Gln Phe Arg Ser
1 5 10 15

Leu Asp

<210> 30
<211> 14
<212> PRT
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<220>
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<400> 30

Glu Gly Lys Ser Ser Gly Ser Gly Ser Glu Ser Lys Ser Thr
1 5 10

<210> 31
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> linker

<400> 31

Gly Ser Ala Gly Ser Ala Ala Gly Ser Gly Glu Phe
1 5 10

<210> 32
<211> 8
<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 32

Gly Gly Gly Gly Gly Gly Gly Gly
1 5

<210> 33

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> linker

<400> 33

Gly Gly Gly Gly Gly Gly
1 5

<210> 34

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> OGD201 VL1

<400> 34

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Lys Asn
20 25 30

Asn Gly Asn Thr Phe Leu His Trp Tyr Gln Gln Arg Pro Gly Gln Ser
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 35

<211> 112

<212> PRT

<213> Artificial Sequence

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<220>

<223> OGD201 VL2

<400> 35

Glu Val Val Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ser Ser Gln Ser Leu Leu Lys Asn
20 25 30

Asn Gly Asn Thr Phe Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Thr Gly Ile Pro
50 55 60

Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
65 70 75 80

Ser Ser Leu Gln Pro Glu Asp Phe Ala Val Tyr Phe Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 36

<211> 112

<212> PRT

<213> Artificial Sequence

<220>

<223> OGD201 VL3

<400> 36

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Lys Asn
20 25 30

Asn Gly Asn Thr Phe Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
Pge p

100 30-11-2017 ATL-B-0006-PCT1 (1)_ST25
105 110

<210> 37
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> OGD201 VL4

<400> 37

Asp Val Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Arg Ser Ser Gln Ser Leu Leu Lys Asn
20 25 30

Asn Gly Asn Thr Phe Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Ser Gly Val Pro
50 55 60

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
65 70 75 80

Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 38
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> OGD201 VL28BH

<400> 38

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Lys Asn
20 25 30

Asn Ala Asn Thr Phe Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
Pge p

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65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 39
<211> 112
<212> PRT
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<220>
<223> OGD201 VL30BH

<400> 39

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val Lys Asn
20 25 30

Gln Gly Asn Thr Phe Leu His Trp Phe Gln Gln Arg Pro Gly Gln Ser
35 40 45

Pro Arg Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Ser Gln Ser
85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 40
<211> 112
<212> PRT
<213> Artificial Sequence

<220>
<223> OGD201 VL28Bs01/A2

<400> 40

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Lys Ser
20 25 30

Asn Ala Asn Thr Phe Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
Pge p

35

40

45

Pro Gln Leu Leu Ile Tyr Lys Val Ser Asn Arg Leu Ser Gly Val Pro
 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ser
 85 90 95

Thr His Ile Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 100 105 110

<210> 41
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> OGD201 VH1

<400> 41

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Thr Ser Glu Phe Thr Phe Thr Asp Tyr
 20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
 35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser
 65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser
 115

<210> 42
 <211> 119
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> OGD201 VH2

<400> 42

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Thr Thr Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ser Ile
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 43

<211> 119

<212> PRT

<213> Artificial Sequence

<220>

<223> 201 VH3-11*01A

<400> 43

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Thr Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr
85 90 95

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Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 44
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> OGD201 VH 72BCDR

<400> 44

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 45
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> OGD201 72BH

<400> 45

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Thr Ser Glu Phe Thr Phe Ser Asp Tyr
20 25 30

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Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 46
<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> OGD201 VH49BCDR

<400> 46

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Thr Ala Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Arg Ala Asn Gly Tyr Thr Thr Glu Tyr Ala Ala
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ser Ile
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 47

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<211> 119
<212> PRT
<213> Artificial Sequence

<220>
<223> OGD201 VH49BH

<400> 47

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Thr Thr Ser Glu Phe Thr Phe Thr Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Asn Pro
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ser Ile
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

<210> 48
<211> 119
<212> PRT
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<220>
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<400> 48

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asp His
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Lys Ala Asn Ser Tyr Thr Thr Glu Tyr Ala Ala
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser
Pge p

65 30-11-2017 ATL-B-0006-PCT1 (1)_ST25 80
 70 75

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser
 115

<210> 49
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 <212> PRT
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<400> 49

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg
 1 5 10 15

Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Thr Asp Tyr
 20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
 35 40 45

Gly Phe Ile Arg Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Ala Ala
 50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ser Ile
 65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
 85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
 100 105 110

Thr Leu Val Thr Val Ser Ser
 115

<210> 50
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 <213> Artificial Sequence

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 <223> OGD201 VH49Bmax

<400> 50

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg

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1 5 10 15

Ser Leu Arg Leu Ser Cys Thr Ala Ser Gly Phe Thr Phe Gly Asp Tyr
20 25 30

Tyr Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Lys Ala Asn Gly Gly Thr Thr Glu Tyr Ala Ala
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ser Ile
65 70 75 80

Ala Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Thr Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser
115

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Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Thr Ser Glu Phe Thr Phe Ser Asp Tyr
20 25 30

Tyr Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Leu
35 40 45

Gly Phe Ile Arg Asn Lys Ala Asn Gly Tyr Thr Thr Glu Tyr Ala Ala
50 55 60

Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Ser
65 70 75 80

Leu Tyr Leu Gln Met Asn Ser Leu Lys Thr Glu Asp Thr Ala Val Tyr
85 90 95

Tyr Cys Ala Arg Val Ser Asn Trp Ala Phe Asp Tyr Trp Gly Gln Gly
100 105 110

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Thr Leu Val Thr Val Ser Ser
115