SEQUENCE LISTING

<110> SANOFI
The Board of Trustees of the Leland Stanford Junior University
Kruip, Jochen
Gambhir, Sanjiv S.
Sarkar, Susanta K.
Gebauer, Mathias
Lange, Christian
Focken, Ingo
Kimura, Richard
Natarajan, Arutselvan
Ilovich, Ohad

<120> IMMUNO IMAGING AGENT FOR USE WITH ANTIBODY-DRUG CONJUGATE THERAPY

<130> 12-1363-WO

<150> US 61/761,188
<151> 2013-02-05

<150> EP 14305081.3
<151> 2014-01-21

<160> 14

<170> PatentIn version 3.5

<210> 1
<211> 329
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 1

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

Glu Arg Val Thr Ile Thr Cys Ser Ala His Ser Ser Val Ser Phe Met
20 25 30

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

Ser Thr Ser Ser Leu Ala Ser Gly Val Pro Ala Arg Phe Gly Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Phe Pro Leu Thr
85 90 95

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Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly Gly Gly Ser Gly
            100                 105                 110

Gly Gly Gly Ser Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Met Ser
        115                 120                 125

Ala Ser Pro Gly Glu Arg Val Thr Ile Thr Cys Ser Ala His Ser Ser
    130                 135                 140

Val Ser Phe Met His Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys
145                 150                 155                 160

Leu Trp Ile Tyr Ser Thr Ser Ser Leu Ala Ser Gly Val Pro Ala Arg
                165                 170                 175

Phe Gly Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser
            180                 185                 190

Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser
        195                 200                 205

Phe Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Thr
    210                 215                 220

Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu
225                 230                 235                 240

Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro
                245                 250                 255

Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly
            260                 265                 270

Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr
        275                 280                 285

Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His
    290                 295                 300

Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val
305                 310                 315                 320

Thr Lys Ser Phe Asn Arg Gly Glu Cys
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<212> PRT

<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 2

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Met Ser Ala Ser Pro Gly
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Glu Arg Val Thr Ile Thr Cys Ser Ala His Ser Ser Val Ser Phe Met
20 25 30

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

Ser Thr Ser Ser Leu Ala Ser Gly Val Pro Ala Arg Phe Gly Gly Ser
50 55 60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65 70 75 80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Phe Pro Leu Thr
85 90 95

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105

<210> 3
<211> 10
<212> PRT
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<400> 3

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

<210> 4
<211> 107
<212> PRT
<213> Homo sapiens

<400> 4

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu
1 5 10 15

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe
20 25 30

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Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln
        35                  40                  45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser
    50                  55                  60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu
65                  70                  75                  80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser
                85                  90                  95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
            100                 105
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<210> 5
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accagcccaa agctgtggat ctacagcacc agcagcctcg ccagcggcgt cccagctcgc      180

tttggcggca gcggctctgg caccagctac agcctgacca tcagcagcat ggaagccgag      240

gacgccgcca cctactactg ccagcagcgg agcagctttc ccctgacctt cggcgctggc      300

accaagctgg aactgaaggg cggaggcgga tccggcggcg gaggctccga gattgtgctg      360

acacagtctc cagccaccat gagcgcctcc ccaggcgagc gcgtgacaat cacatgctcc      420

gcccactcct ccgtgtcttt tatgcattgg tttcagcaga aacctgggac atcccctaaa      480

ctctggatct actccacctc ctccctggcc tccggggtgc ccgctagatt tggaggctct      540

ggcagcggca cctcctactc cctgaccatc tcctctatgg aagctgaaga tgctgcaaca      600

tattattgcc agcagagaag ctccttccca ctgacatttg gggccggaac aaagctcgag      660

ctgaagcgta cggtggccgc tccttccgtg ttcatcttcc ctccctccga cgagcagctg      720

aagtccggca ccgcctccgt ggtgtgtctg ctgaacaact tctaccctcg ggaggccaag      780

gtgcagtgga aggtggacaa cgccctgcag tccggcaact cccaggagtc cgtcaccgag      840

caggactcca aggacagcac ctactccctg tcctccaccc tgaccctgtc caaggccgac      900

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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

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acctgtagcg cccacagcag cgtcagtttc atgcactggt tccagcagaa gcccggcacc 180

agcccaaagc tgtggatcta cagcaccagc agcctcgcca gcggcgtccc agctcgcttt 240

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gccgccacct actactgcca gcagcggagc agctttcccc tgaccttcgg cgctggcacc 360

aagctggaac tgaagggcgg aggcggatcc ggcggcggag gctccgagat tgtgctgaca 420

cagtctccag ccaccatgag cgcctcccca ggcgagcgcg tgacaatcac atgctccgcc 480

cactcctccg tgtcttttat gcattggttt cagcagaaac ctgggacatc ccctaaactc 540

tggatctact ccacctcctc cctggcctcc ggggtgcccg ctagatttgg aggctctggc 600

agcggcacct cctactccct gaccatctcc tctatggaag ctgaagatgc tgcaacatat 660

tattgccagc agagaagctc cttcccactg acatttgggg ccggaacaaa gctcgagctg 720

aagcgtacgg tggccgctcc ttccgtgttc atcttccctc cctccgacga gcagctgaag 780

tccggcaccg cctccgtggt gtgtctgctg aacaacttct accctcggga ggccaaggtg 840

cagtggaagg tggacaacgc cctgcagtcc ggcaactccc aggagtccgt caccgagcag 900

gactccaagg acagcaccta ctccctgtcc tccaccctga ccctgtccaa ggccgactac 960

gagaagcaca aggtgtacgc ctgtgaggtg acccaccagg gcctgtccag ccctgtgacc 1020

aagtccttca accggggcga gtgc 1044

<210> 7
<211> 352
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 7

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

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr

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            20                  25                  30

Asn Met His Trp Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile
        35                  40                  45

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

Gln Gly Lys Ala Thr Leu Thr Ala Asp Pro Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

Met Gln Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95

Ala Arg Gly Asp Ser Val Pro Phe Ala Tyr Trp Gly Gln Gly Thr Leu
            100                 105                 110

Val Thr Val Ser Ala Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Glu
        115                 120                 125

Ala Gln Leu Val Gln Ser Gly Ala Glu Val Val Lys Pro Gly Ala Ser
    130                 135                 140

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

Met His Trp Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile Gly
                165                 170                 175

Tyr Ile Tyr Pro Gly Asn Gly Ala Thr Asn Tyr Asn Gln Lys Phe Gln
            180                 185                 190

Gly Lys Ala Thr Leu Thr Ala Asp Pro Ser Ser Ser Thr Ala Tyr Met
        195                 200                 205

Gln Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala
    210                 215                 220

Arg Gly Asp Ser Val Pro Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
225                 230                 235                 240

Thr Val Ser Ala Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala
                245                 250                 255

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu
            260                 265                 270
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Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly
275 280 285

Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser
290 295 300

Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu
305 310 315 320

Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr
325 330 335

Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr
340 345 350

<210> 8
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 8

Glu Ala Gln Leu Val Gln Ser Gly Ala Glu Val Val Lys Pro Gly Ala
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Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
20 25 30

Asn Met His Trp Val Lys Gln Thr Pro Gly Gln Gly Leu Glu Trp Ile
35 40 45

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

Gln Gly Lys Ala Thr Leu Thr Ala Asp Pro Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Asp Ser Val Pro Phe Ala Tyr Trp Gly Gln Gly Thr Leu
100 105 110

Val Thr Val Ser Ala
115

<210> 9

<211> 108
<212> PRT
<213> Homo sapiens

<400> 9

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys
1 5 10 15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
65 70 75 80

Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
85 90 95

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

<210> 10
<211> 1056
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

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ccagggcagg gcctggaatg gattggctac atctaccccg gcaacggcgc caccaactac 180

aaccagaagt tccagggcaa ggctaccctg accgccgacc ctagcagcag caccgcctac 240

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ggatccggcg gaggcggaag cgaagcccag ctcgtccaga gcggagccga ggtcgtgaaa 420

ccaggcgcct ctgtgaagat gtcttgcaag gcctctggct ataccttttac ctcctataat 480

atgcattggg tcaaacagac acctggacag ggactcgagt ggatcggata tatctatcct 540

ggaaatgggg ccacaaatta caatcagaaa tttcagggga aagccacact gacagccgat 600

cccagctcct ccacagccta tatgcagatt agctctctga cctccgagga ctccgccgtg 660

tatttttgtg cccggggaga ctccgtgcct tttgcttact ggggacaggg cacactcgtg 720

acagtgtccg ccgcttccac caagggcccc tccgtgtttc ctctggcccc cagcagcaag 780

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ctgcagagca gcggcctgta ctctctgagc agcgtcgtga ccgtgcccag cagcagcctg 960

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aaggtggaac ccaagagctg cgacaagacc cacacc 1056

<210> 11
<211> 1113
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide

<400> 11
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gggcagggcc tggaatggat tggctacatc taccccggca acggcgccac caactacaac 240

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cagatcagca gcctgaccag cgaggacagc gccgtgtact tctgcgccag aggcgacagc 360

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tccggcggag gcggaagcga agcccagctc gtccagagcg gagccgaggt cgtgaaacca 480

ggcgcctctg tgaagatgtc ttgcaaggcc tctggctata cctttacctc ctataatatg 540

cattgggtca aacagacacc tggacaggga ctcgagtgga tcggatatat ctatcctgga 600

aatggggcca caaattacaa tcagaaattt caggggaaag ccacactgac agccgatccc 660

agctcctcca cagcctatat gcagattagc tctctgacct ccgaggactc cgccgtgtat 720

ttttgtgccc ggggagactc cgtgcctttt gcttactggg gacagggcac actcgtgaca 780

gtgtccgccg cttccaccaa gggcccctcc gtgtttcctc tggccccag cagcaagagc 840

acctctggcg gaacagccgc cctgggctgc ctggtcaagg actacttccc cgagcccgtg 900

accgtgtctt ggaactctgg cgccctgacc tccggcgtcc acacctttcc agccgtgctg 960

cagagcagcg gcctgtactc tctgagcagc gtcgtgaccg tgcccagcag cagcctgggg 1020

acccagacct acatctgcaa cgtgaaccac aagcccagca acaccaaggt ggacaagaag 1080

gtggaaccca agagctgcga caagacccac acc 1113

<210> 12
<211> 231
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 12

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Glu Arg Val Thr Ile Thr Cys Ser Ala His Ser Ser Val Ser Phe Met
            20                  25                  30

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

Ser Thr Ser Ser Leu Ala Ser Gly Val Pro Ala Arg Phe Gly Gly Ser
    50                  55                  60

Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Met Glu Ala Glu
65                  70                  75                  80

Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Phe Pro Leu Thr
                85                  90                  95

Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Gly Gly Gly Ser Gly Gly
            100                 105                 110

Gly Gly Glu Ala Gln Leu Val Gln Ser Gly Ala Glu Val Val Lys Pro
        115                 120                 125

Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
    130                 135                 140

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

Trp Ile Gly Tyr Ile Tyr Pro Gly Asn Gly Ala Thr Asn Tyr Asn Gln
                165                 170                 175

Lys Phe Gln Gly Lys Ala Thr Leu Thr Ala Asp Pro Ser Ser Ser Thr
            180                 185                 190

Ala Tyr Met Gln Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr
        195                 200                 205
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Phe Cys Ala Arg Gly Asp Ser Val Pro Phe Ala Tyr Trp Gly Gln Gly
210 215 220

Thr Leu Val Thr Val Ser Ala
225 230

<210> 13
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 13

Gly Gly His His His His His His
1 5

<210> 14
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide

<400> 14

Gly Gly Cys Gly Gly His His His His His His
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