

LD40322_Sequence Protocol_ST25
SEQUENCE LISTING

<110> Hexal AG

<120> Pharmaceutical formulation comprising a biopharmaceutical drug

<130> LD40322

<160> 10

<170> PatentIn version 3.5

<210> 1

<211> 1413

<212> DNA

<213> Artificial

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<223> Anti TNFalpha IgG Heavy chain Coding sequence

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ggcaaaggcc tcgagtgggt gtccgccatc acctggaact ccggccacat cgactacgcc	240
gactccgtgg agggccggtt caccatctcc cgggacaacg ccaagaactc cctgtacctg	300
cagatgaact ccctgcgggc cgaggacacc gccgtgtact actgcgcaa ggtgtcctac	360
ctgtccaccg cctcctccct ggactactgg ggccagggca ccctggtcac cgtgtcctcc	420
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ctggactccg acggctcctt cttcctgtac tccaagctga ccgtggacaa gtcccgggtg	1320
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 <223> Anti TNFalpha IgG Light chain Coding sequence

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atcacctgcc gggcctccca gggcatccgg aactacctgg cctggtatca gcagaagcct      180
ggcaaggccc ctaagctgct gatctacgcc gcctccaccc tgcagtccgg cgtgccttcc      240
cggttctccg gctccggcag cggcaccgac ttcaccctga ccatctcctc cctgcagcct      300
gaggacgtgg ccacactact ctgccagcgg tacaacagag ccccttacac cttcggccag      360
ggcaccaagg tggagatcaa gcgtacggtg gccgctcctt ccgtgttcat cttccctccc      420
tccgacgagc agctgaagtc cggcaccgcc agcgtcgtct gcctgctgaa caacttctac      480
cctcgggagg ccaaggtgca gtggaaggtg gacaacgccc tgcagagcgg caactcccag      540
gaatccgtca ccgagcagga ctccaaggac agcacctact ccctgtccag caccctgacc      600
ctgtccaagg ccgactacga gaagcacaag gtgtacgcct gcgagggtcac ccaccagggc      660
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<210> 3
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 <223> Anti TNFalpha IgG Heavy chain amino acid sequence

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20          25          30

Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
35          40          45

Asp Asp Tyr Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
50          55          60

Glu Trp Val Ser Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala
65          70          75          80

Asp Ser Val Glu Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn
85          90          95
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Ser Leu Tyr Leu₁₀₀ Gln Met Asn Ser Leu₁₀₅ Arg Ala Glu Asp Thr₁₁₀ Ala Val

Tyr Tyr Cys₁₁₅ Ala Lys Val Ser Tyr₁₂₀ Leu Ser Thr Ala Ser₁₂₅ Ser Leu Asp

Tyr Trp₁₃₀ Gly Gln Gly Thr Leu₁₃₅ Val Thr Val Ser Ser₁₄₀ Ala Ser Thr Lys

Gly₁₄₅ Pro Ser Val Phe Pro₁₅₀ Leu Ala Pro Ser Ser₁₅₅ Lys Ser Thr Ser Gly₁₆₀

Gly Thr Ala Ala Leu₁₆₅ Gly Cys Leu Val Lys₁₇₀ Asp Tyr Phe Pro Glu₁₇₅ Pro

Val Thr Val Ser₁₈₀ Trp Asn Ser Gly Ala₁₈₅ Leu Thr Ser Gly Val₁₉₀ His Thr

Phe Pro Ala₁₉₅ Val Leu Gln Ser Ser₂₀₀ Gly Leu Tyr Ser Leu₂₀₅ Ser Ser Val

Val Thr₂₁₀ Val Pro Ser Ser₂₁₅ Leu Gly Thr Gln Thr₂₂₀ Tyr Ile Cys Asn

Val₂₂₅ Asn His Lys Pro Ser₂₃₀ Asn Thr Lys Val Asp₂₃₅ Lys Lys Val Glu Pro₂₄₀

Lys Ser Cys Asp Lys₂₄₅ Thr His Thr Cys Pro₂₅₀ Pro Cys Pro Ala Pro₂₅₅ Glu

Leu Leu Gly₂₆₀ Gly Pro Ser Val Phe Leu₂₆₅ Phe Pro Pro Lys Pro₂₇₀ Lys Asp

Thr Leu Met₂₇₅ Ile Ser Arg Thr Pro₂₈₀ Glu Val Thr Cys Val₂₈₅ Val Val Asp

Val Ser₂₉₀ His Glu Asp Pro Glu₂₉₅ Val Lys Phe Asn Trp₃₀₀ Tyr Val Asp Gly

Val₃₀₅ Glu Val His Asn Ala₃₁₀ Lys Thr Lys Pro Arg₃₁₅ Glu Glu Gln Tyr Asn₃₂₀

Ser Thr Tyr Arg Val₃₂₅ Val Ser Val Leu Thr₃₃₀ Val Leu His Gln Asp₃₃₅ Trp

Leu Asn Gly Lys₃₄₀ Glu Tyr Lys Cys Lys₃₄₅ Val Ser Asn Lys Ala₃₅₀ Leu Pro

Ala Pro Ile₃₅₅ Glu Lys Thr Ile Ser₃₆₀ Lys Ala Lys Gly Gln₃₆₅ Pro Arg Glu

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

370

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
385 390 395 400

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
405 410 415

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
420 425 430

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
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Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
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Ser Leu Ser Pro Gly Lys
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<223> Anti TNFalpha IgG Light chain amino acid sequence

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Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly
35 40 45

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

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

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser
85 90 95

Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys Gln Arg Tyr Asn
100 105 110

Arg Ala Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
115 120 125

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Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln
130 135 140

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

Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln Ser
165 170 175

Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr
180 185 190

Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys
195 200 205

His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro
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Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
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<222> (12)..(12)
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<210> 7

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<220>
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Gly

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<220>
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<210> 10
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 <212> PRT
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<220>
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<400> 10

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 1 5