64. The monovalent antibody according to any one of the preceding claims 1-57 for use in the treatment of a disease or disorder, which disease or disorder is treatable by blocking or inhibiting a soluble antigen, wherein multimerization of said antigen may form undesirable immune complexes, and wherein said antibody specifically binds said antigen.

65. The monovalent antibody according to any one of the preceding claims 1-57 for use in the treatment of a disease or disorder, which disease or disorder is treatable by blocking or inhibiting a cell membrane bound receptor, wherein said receptor may be activated by dimerization of said receptor, and wherein said antibody specifically binds said receptor.

66. The monovalent antibody according to any one of the preceding claims 1-57, wherein the treatment comprises administering one or more further therapeutic agents.

67. Use of the monovalent antibody according to any one of the preceding claims 1-57 in the preparation of a medicament for the treatment of a disease or disorder as defined in any of the preceding claims 61-66.

68. Use of a monovalent antibody according to any one of the preceding claims 1-57 as a diagnostic agent.

69. A nucleic acid construct encoding the monovalent antibody according to any one of the preceding claims 1-56.

70. A monovalent antibody according to any one of the preceding claims 1-57, for use in the treatment of a disease or disorder as defined in any one of the preceding claims 61-66.

71. A pharmaceutical composition according to claim 58, for use in the treatment of a disease or disorder as defined in any one of the preceding claims 61-66.

72. A nucleic acid construct according to claim 69, for use in the treatment of a disease or disorder as defined in any one of the preceding claims 61-66.

73. The monovalent antibody according to claim 70 comprising one or more further therapeutic agents.

74. The pharmaceutical composition according to claim 71 comprising one or more further therapeutic agents.

75. The nucleic acid construct according to claim 72 comprising one or more further therapeutic agents.

76. A method of preparing a monovalent antibody according to any one of the preceding claims 1-56 comprising culturing a host cell comprising a nucleic acid construct according to claim 69, so that the monovalent antibody is produced, and recovering the said monovalent antibody from the cell culture.

77. A host cell comprising a nucleic acid according to claim 69, wherein said host cell is a prokaryotic cell, such as an E. coli cell or a eukaryotic cell, such as a mammalian cell, fungal cell or plant cell.

78. A stabilized IgG4 antibody for use as a medicament, comprising a heavy chain and a light chain, wherein said heavy chain comprises a human IgG4 constant region having the sequence set forth in SEQ ID NO:2, wherein Lys (K) in position 250 has been replaced by Gln (Q) or Glu (E); and wherein the antibody optionally comprises one or more further substitutions, deletions and/or insertions in the constant region as set forth in SEQ ID NO:2

79. The stabilized IgG4 antibody of claim 78, wherein the antibody does not comprise a Cys-Pro-Pro-Cys sequence in the hinge region.

80. The stabilized IgG4 antibody of claim 78 or 79, wherein the CH3 region of the antibody has been replaced by the CH3 region of human IgG1, of human IgG2 or of human IgG3.

81. The stabilized IgG4 antibody of any one of the preceding claims 78 to 80, wherein said antibody does not comprise a substitution of the Leu (L) residue at the position corresponding to 115 by a Glu (E).

82. The stabilized IgG4 antibody of any one of the preceding claims 78 to 80, wherein said antibody does comprise a substitution of the Leu (L) residue at the position corresponding to 115 by a Glu (E).

83. The stabilized IgG4 antibody of any one of the preceding claims 78 to 82, wherein said antibody comprises one or more of the following substitutions an Ala (A) at position 114, an Ala (A) at position 116, an Ala (A) at position 117, an Ala (A) at position 177, an Ala (A) or Val (V) at position 198 an Ala (A) at position 200, an Ala (A) or Gln (Q) at position 202.

84. The stabilized IgG4 antibody of any one of the preceding claims 78 to 83, wherein said

antibody comprises a CXPC or CPXC sequence in the hinge region, wherein X can be any amino acid except for Pro (P).

85. The stabilized IgG4 antibody of any one of the preceding claims 78 to 84, wherein said antibody does not comprise an extended IgG3-like hinge region.

86. The stabilized IgG4 antibody of any one of the preceding claims 78 to 85, wherein said antibody comprises a CPSC sequence in the hinge region.

87. The stabilized IgG4 antibody of any one of the preceding claims 78 to 86, wherein said antibody has less than 25, such as less than 10, e.g. less than 9, 8, 7, 6, 5, 4, 3, or 2 substitutions, deletions and/or insertions in the constant region as set forth in SEQ ID NO:2.

88. The stabilized IgG4 antibody of any one of the preceding claims 78 to 87, wherein said antibody is less efficient in mediating CDC and/or ADCC than a corresponding IgG1 or IgG3 antibody having the same variable regions.

89. The stabilized IgG4 antibody of any one of the preceding claims 78 to 88, wherein said antibody is selected from the group consisting of a human monoclonal antibody, a humanized monoclonal antibody and a chimeric monoclonal antibody.

90. The stabilized IgG4 antibody of any one of the preceding claims 78 to 89, wherein said antibody comprises a human kappa light chain.

91. The stabilized IgG4 antibody of any one of the preceding claims 78 to 90, wherein said antibody comprises a human lambda light chain.

92. The stabilized IgG4 antibody of any one of the preceding claims 78 to 91, wherein said antibody is a bivalent antibody.

93. The stabilized IgG4 antibody of any one of the preceding claims 78 to 92, wherein said antibody is a full-length antibody.

94. The stabilized IgG4 antibody of any one of the preceding claims 78 to 93, wherein said antibody is linked to a compound selected from the group consisting of a cytotoxic agent; a radioisotope; a prodrug or drug, such as a taxane; a cytokine; and a chemokine.

95. The stabilized IgG4 antibody of any one of the preceding claims 78 to 94, wherein the

antibody binds to an antigen selected from the group consisting of erythropoietin, beta-amyloid, thrombopoietin, interferon-alpha (2a and 2b), interferon-beta (1b), interferon-gamma, TNFR I (CD120a), TNFR II (CD120b), IL-1R type 1 (CD121a), IL-1R type 2 (CD121b), IL-2, IL2R (CD25), IL-2R-beta (CD123), IL-3, IL-4, IL-3R (CD123), IL-4R (CD124), IL-5R (CD125), IL-6R-alpha (CD126), -beta (CD130), IL-8, IL-10, IL-11, IL-15, IL-15BP, IL-15R, IL-20, IL-21, TCR variable chain, RANK, RANK-L, CTLA4, CXCR4R, CCR5R, TGF-beta1, -beta2, -beta3, G-CSF, GM-CSF, MIF-R (CD74), M-CSF-R (CD115), GM-CSFR (CD116), soluble FcRI, sFcRII, sFcRIII, FcRn, Factor VII, Factor VIII, Factor IX, VEGF, VEGFxxxb, alpha-4 integrin, Cd11a, CD18, CD20, CD38, CD25, CD74, FcalphaRI, FcepsilonRI, acetyl choline receptor, fas, fasL, TRAIL, hepatitis virus, hepatitis C virus, envelope E2 of hepatitis C virus, tissue factor, a complex of tissue factor and Factor VII, EGFr, CD4, CD28, VLA-1, 2, 3, or 4, LFA-1, MAC-1, l-selectin, PSGL-1, ICAM-I, P-selectin, periostin, CD33 (Siglec 3), Siglec 8, TNF, CCL1, CCL2, CCL3, CCL4, CCL5, CCL11, CCL13, CCL17, CCL18, CCL20, CCL22, CCL26, CCL27, CX3CL1, LIGHT, EGF, VEGF, TGFalpha, HGF, PDGF, NGF, complement or a related components such as: C1q, C4, C2, C3, C5, C6, C7, C8, C9, MBL, factor B, a Matrix Metallo Protease such as any of MMP1 to MMP28, CD32b, CD200, CD200R, Killer Immunoglobulin-Like Receptors (KIRs), NKG2D and related molecules, leukocyte-associated immunoglobulin-like receptors (LAIRs), ly49, PD-L2, CD26, BST-2, ML-IAP (melanoma inhibitor of apoptosis protein), cathepsin D, CD40, CD40R, CD86, a B cell receptor, CD79 , PD-1 and a T cell receptor.

64. The monovalent antibody according to any one of the preceding claims 1-57 for use in the treatment of a disease or disorder, which disease or disorder is treatable by blocking or inhibiting a soluble antigen, wherein multimerization of said antigen may form undesirable immune complexes, and wherein said antibody specifically binds said antigen.

65. The monovalent antibody according to any one of the preceding claims 1-57 for use in the treatment of a disease or disorder, which disease or disorder is treatable by blocking or inhibiting a cell membrane bound receptor, wherein said receptor may be activated by dimerization of said receptor, and wherein said antibody specifically binds said receptor.

66. The monovalent antibody according to any one of the preceding claims 1-57 for use in the treatment of a disease or disorder, wherein the treatment comprises administering one or more further therapeutic agents.

67. Use of the monovalent antibody according to any one of the preceding claims 1-57 in the preparation of a medicament for the treatment of a disease or disorder as defined in any of the preceding claims 61-66.

68. Use of a monovalent antibody according to any one of the preceding claims 1-57 as an *in vitro* diagnostic agent.

69. A nucleic acid construct encoding the monovalent antibody according to any one of the preceding claims 1-56.

70. A monovalent antibody according to any one of the preceding claims 1-57, for use in the treatment of a disease or disorder as defined in any one of the preceding claims 61-66.

71. A pharmaceutical composition according to claim 58, for use in the treatment of a disease or disorder as defined in any one of the preceding claims 61-66.

72. A nucleic acid construct according to claim 69, for use in the treatment of a disease or disorder as defined in any one of the preceding claims 61-66.

73. The monovalent antibody according to claim 70 comprising one or more further therapeutic agents.

74. The pharmaceutical composition according to claim 71 comprising one or more further therapeutic agents.

75. The nucleic acid construct according to claim 72 comprising one or more further therapeutic agents.

76. A method of preparing a monovalent antibody according to any one of the preceding claims 1-56 comprising culturing a host cell comprising a nucleic acid construct according to claim 69, so that the monovalent antibody is produced, and recovering the said monovalent antibody from the cell culture.

77. A host cell comprising a nucleic acid according to claim 69, wherein said host cell is a prokaryotic cell, such as an E. coli cell or a eukaryotic cell, such as a mammalian cell, fungal cell or plant cell.