WHAT IS CLAIMED IS:

1. A modified Fc-containing molecule which is resistant to proteolytic degradation as compared to an IgG1 wildtype Fc-containing molecule, comprising an antibody Fc domain with a mutated IgG1 constant region, wherein the sequence of E233-L234-L235-G236 of human IgG1 is replaced with P233-V234-A235 with G236 deleted , as defined by EU numbering, and further comprises one or more substitutions from the wild-type human IgG1 sequence selected from S239D/I332E; K326A/E333A; E333A/K334A; H268F/S324T/I332E; F243L/R292P/Y300L; S239D/H268F/S324T/I332E; S267E/H268F/S324T/I332E; K326A/I332E/E333A; S239D/K326A/E333A; S267E/I332E; and G237X/S239D/I332E where X is A, D, P, Q OR S.

2. The Fc-containing molecule of claim 1, wherein the Fc-containing molecule is resistant to degradation by a protease capable of cleaving an IgG1 molecule between residues 222-237 (EU numbering.

3. The Fc-containing molecule of claim 2, wherein the Fc-containing molecule is resistant to degradation by MMP-3, MMP-7, MMP-12, MMP-13, HNE, plasmin, cathepsin G, pepsin, immunoglobulin degrading enzyme from *Strep. Pyrongenes* (IdeS), or glutamyl endopeptidase I from *Staph. aureus* (GluV8) as compared to wild-type IgG1.

4. The Fc-containing molecule of claim 3, wherein the Fc-containing molecule is resistant to degradation by one or more of MMP-3, MMP-7, IdeS, or GluV8 as compared to wild-type IgG1.

5. The Fc-containing molecule of claim 1, wherein the Fc-containing molecule is capable of promoting ADCP measured in the presence of CD14 pos and/or CD11b pos blood mononuclear cells, wherein the molecule comprises the sequence selected from the group SEQ ID NO: 8, 10-15, and 17-20.

6. The Fc-containing molecule of claim 5, wherein molecule comprises a hinge domain of the wild-type IgG1 substituted with P233-V234-A235 with G236 deleted defined by EU numbering or comprises SEQ ID NO: 3; with the additional I332E as defined by the EU numbering system.

7. The Fc-containing molecule of claim 1, wherein the Fc-containing molecule is capable of promoting ADCC measured in the presence of blood mononuclear cells.

8. The Fc-containing molecule of claim 7, wherein molecule comprises a hinge domain of the wild-type IgG1 substituted with P233-V234-A235 with G236 deleted defined by EU numbering or comprises SEQ ID NO: 3; with the additional I332E as defined by the EU numbering system.

9. The Fc-containing molecule of claim 7, wherein the molecule comprises the sequence selected from the group SEQ ID NO: 8 and 10-12, and 15, 17-20.

10. The Fc-containing molecule of claim 1, wherein the Fc-containing molecule is capable of promoting complement-dependent cytotoxicity (CDC) measured by cell lysis in the presence of complement.

11. The Fc-containing molecule of claim 10, wherein the Fc-containing molecule is comprises the sequence selected from the group SEQ ID NO: 13, 14, and 18-20.

12. The Fc-containing molecule of claim 1, wherein the Fc-containing molecule is capable of binding an Fcγ receptor with comparable or greater affinity than a wild-type IgG2 Fc-domain.

13. The Fc-containing molecule of claim 1, wherein the Fc-containing molecule is capable of binding an Fcγ receptor with comparable or greater affinity than a wild-type IgG1 Fc-domain.

14. The Fc-containing molecule of claim 7, comprising SEQ ID NO: 8.

15. The Fc-containing molecule of any one of claims 1-14, wherein the Fc-containing molecule is an antibody or Fc fusion protein.

16. The antibody of claim 15, wherein the antibody binds to an antigen on a tumor cell, tumor matrix, or tumor vasculature.

17. The antibody of claim 16, wherein the antibody binds to one of CD20, ErbB1, ErbB2, ErbB3, VEGF, RON, and tissue factor.

18. The Fc-containing molecule of claim 1, wherein the Fc domain sequence is at least 90% identity with wild-type human IgG1 from residue 214 to about residue 340 in the EU numbering system.

19. An isolated binding molecule which is a recombinant polypeptide comprising: (i) a binding domain capable of binding a target molecule on or bound to a cell, and (ii) an Fc domain having an amino acid sequence substantially homologous to all or part of a CH2 and CH3 constant domains of a human IgG1 heavy chain and wherein residues 214 to 238, defined by the EU numbering system, comprise a sequence selected from SEQ ID NO: 4 and 5; characterized in that the binding molecule is capable of binding the target molecule on a target cell and the molecule produces measurable complement dependent lysis, or cell mediated destruction of the target cell in the presence of the requisite effector cell type.

20. The binding molecule of claim 19 wherein the Fc domain further comprises one or more substitutions from the wild-type human IgG1 sequence selected from S239D/I332E; K326A/E333A; E333A/K334A; H268F/S324T/I332E; F243L/R292P/Y300L; S239D/H268F/S324T/I332E; S267E/H268F/S324T/I332E; K326A/I332E/E333A; S239D/K326A/E333A; S267E/I332E;and G237X/S239D/I332E where X is A, D, P, Q OR S.

21. The binding molecule of claim 19, wherein the Fc-domain is resistant is resistant to degradation by a protease capable of cleaving an IgG1 molecule between residues 222-237 (EU numbering).

22. The Fc-containing molecule of claim 21, wherein the Fc-containing molecule is resistant to degradation by MMP-3, MMP-7, MMP-12, MMP-13, HNE, plasmin, cathepsin G, pepsin, IdeS, or GluV8 as compared to wild-type IgG1.

23. The binding molecule according to claim 19 wherein the binding domain is selected from a domain containing the paratope of an antibody; an enzyme; a hormone; a receptor; a cytokine; an immune cell surface antigen; and an adhesion molecule.

24. The binding molecule of claim 23, wherein the molecule comprises two or more target binding domains and exhibits avidity.

25. The binding molecule of claim 24, wherein the binding domain comprises a paratope of an antibody that binds to an antigen on a tumor cell or tumor vasculature.

26. The binding molecule of claim 25, wherein the binding molecule binds to one of CD20, ErbB1, ErbB2, ErbB3, VEGF, RON and tissue factor.

27. A pharmaceutical composition comprising the Fc-containing molecule of claim 1 or 26.

28. A method for treating a disease characterized by the unwanted proliferation or migration of cells, comprising administering to a subject or patient the pharmaceutical composition of claim 25.

29. The method of claim 28, where in the disease is a malignant disease, fibrotic disease or a disease characterized by unwanted angiogenesis.

30. The method of claim 29, wherein the Fc includes substitutions selected from I332E alone or in combination with other substitutions such as S239D/I332E, S239D/H268F/I332E, S239D/H268F/S324T/I332E, S267E/H268F/S324T/I332E, G237X/S239D/I332E where X is A or S; K326A/E333A; and F243L/R292P/Y300L.

31. The method of claim 29, wherein the Fc includes substitutions selected from S239D alone or in combination with other substitutions such as S239D/I332E, S239D/H268F/I332E, S239D/H268F/S324T/I332E, S267E/H268F/S324T/I332E, G237X/S239D/I332E where X is A or S; K326A/E333A; and F243L/R292P/Y300L.

32. A method of treating a disease characterized as an infection of a prokaryotic organism, the method comprising the administration of a binding molecule of claim 19.

33. The method of claim 31, wherein the Fc is resistant to a prokaryotic protease and capable of CDC.

34. The method of claim 31, wherein the Fc domain has sequence of a human IgG1 in the hinge and CH2 regions, from about EU residues 214 to about residue 330 where at least residues 233-237 are substituted with PVA/ (G236 deletion) and further comprising one or more substitutions in the CH2 domain selected from K326A/E333A, S267E/H268F/S324T/I332E, K326A/I332E/E333A, S239D/K326A/E333A, and S267/I332E.

35. The method of claim 31, wherein the binding molecule comprises a sequence selected from the group SEQ ID NO: 13, 14, and 18-20.

What is claimed is:

1. An isolated modified Fc-containing molecule or a fragment thereof comprising a wild type human IgG1 Fc region of SEQ ID NO: 1 comprising a hinge, a CH2 domain and a CH3 domain, wherein

a) the sequence of E233-L234-L235-G236 in the hinge is replaced with P233-V234-A235 with G236 deleted; and

b) the CH2 domain comprises at least one substitution selected from S239D/1332E, K326A/E333A, H268F/S324T/1332E, F243L/R292P/Y300L, S239D/H268F/S324T/1332E, S267E/H268F/S324T/1332E, K326A/1332E/E333A, S239D/K326A/E333A, S267E/I332E and G237X/S239D/1332E where X is A, D, P, Q or S; wherein amino acid residues are numbered according to EU numbering.

2. The isolated modified Fc-domain containing molecule of claim **1**, wherein the molecule is resistant to proteolytic degradation by a protease that cleaves the wild type human IgG1 molecule between or at residues 222-237 (EU numbering).

3. The isolated modified Fc-domain containing molecule of claim **1**, wherein the molecule is capable of promoting antibody-dependent cellular phagocytosis (ADCP) measured in the presence of CD14 positive and/or CD11b positive human monocyte-derived macrophages, is capable of promoting antibody-dependent cell-mediated cytotoxicity (ADCC) measured in the presence of blood mononuclear cells, and/or is capable of promoting complement-dependent cytotoxicity (CDC) measured by cell lysis in the presence of complement.

4. The isolated modified Fc-domain containing molecule of claim **3**, wherein the molecule induces IL-10 secretion by human monocyte-derived macrophages by about no more than three times more when compared to the IL-10 secretion by the human monocyte-derived macrophages in the absence of the isolated modified Fc-containing molecule.

5. The isolated modified Fc-domain containing molecule of claim **4**, wherein the molecule has an IC_{50} fold change ratio value of 0.04 or less measured in a competition assay with biotinylated human IgG1 to 0.2 μg/ml soluble human FcγRI, wherein the IC_{50} fold change ratio is a ratio of an IC_{50} value for a wild type human IgG1 to an IC_{50} value for the isolated modified Fc-domain containing protein of claim **1**.

6. The isolated modified Fc-domain containing molecule of claim **5**, wherein the molecule at a concentration of 0.5

μg/ml induces interferon-gamma (IFNγ) secretion by pheripheral blood mononuclear cells (PBMCs) by at least three times more when compared to the IFNγ secretion by the PBMCs in the absence of the isolated modified Fc-domain containing molecule.

7. The isolated modified Fc-domain containing molecule of claim **1**, wherein the protease that cleaves the wild type IgG1 molecule between or at residues 222-237 is matrix metalloprotease (MMP) 2 (MMP-2), MMP-3, MMP-7, MMP-9, MMP-12, MMP-13, immunoglobulin degrading enzyme from *Strep. Pyrongenes* (IdeS), glutamyl endopeptidase I from *Staph. aureus* (GluV8), human neutrophil elastase (HNE), plasmin, cathepsin G, or pepsin.

8. The isolated modified Fc-domain containing molecule of claim **7**, wherein the protease that cleaves the wild type IgG1 molecule between or at residues 222-237 is MMP-3, MMP-7, MMP-12, MMP-13, IdeS, or GluV8.

9. The isolated modified Fc-domain containing molecule of claim **1**, wherein the Fc-containing molecule comprises the polypeptide sequence of SEQ ID NOs: 8, 10-15 or 18-20.

10. The isolated modified Fc-domain containing molecule of claim **1**, wherein the Fc-containing molecule is an antibody or an Fc fusion protein.

11. An isolated antibody or fragment thereof comprising a modified Fc-containing molecule comprising a wild type human IgG1 Fc region of SEQ ID NO: 1 comprising a hinge, a CH2 domain and a CH3 domain, wherein

a) the sequence of E233-L234-L235-G236 in the hinge is replaced with P233-V234-A235 with G236 deleted; and

b) the CH2 domain comprises at least one substitution selected from S239D/I332E, K326A/E333A, H268F/S324T/I332E, F243L/R292P/Y300L, S239D/H268F/S324T/I332E, S267E/H268F/S324T/I332E, K326A/I332E/E333A, S239D/K326A/E333A, S267E/I332E and G237X/S239D/I332E where X is A, D, P, Q or S; wherein amino acid residues are numbered according to EU numbering.

12. The isolated antibody of claim **11**, wherein the antibody is resistant to proteolytic degradation by a protease that cleaves the wild type human IgG1 molecule between or at residues 222-237.

13. The isolated antibody of claim **11**, wherein the antibody is capable of promoting antibody-dependent cellular phagocytosis (ADCP) measured in the presence of CD14 positive and/or CD11b positive human monocyte-derived macroph-

ages, is capable of promoting antibody-dependent cell-mediated cytotoxicity (ADCC) measured in the presence of blood mononuclear cells, or is capable of promoting complement-dependent cytotoxicity (CDC) measured by cell lysis in the presence of complement.

14. The isolated antibody of claim **11**, wherein the antibody is capable of promoting antibody-dependent cellular phagocytosis (ADCP) measured in the presence of CD14 positive and/or CD11b positive human monocyte-derived macrophages, is capable of promoting antibody-dependent cell-mediated cytotoxicity (ADCC) measured in the presence of blood mononuclear cells, and is capable of promoting complement-dependent cytotoxicity (CDC) measured by cell lysis in the presence of complement.

15. The isolated antibody of claim **13** or **14**, wherein the antibody induces IL-10 secretion by human monocyte-derived macrophages by about no more than three times more when compared to the IL-10 secretion by the human monocyte-derived macrophages in the absence of the isolated antibody.

16. The isolated antibody of claim **14**, wherein the antibody has an IC_{50} fold change ratio value of 0.04 or less measured in a competition assay with biotinylated human IgG1 to 0.2 μg/ml soluble human FcγRI, wherein the IC_{50} fold change ratio is a ratio of an IC_{50} value for a wild type human IgG1 to an IC_{50} value for the isolated antibody of claim **11**.

17. The isolated antibody of claim **16**, wherein the antibody at a concentration of 0.5 μg/ml induces interferon-gamma (IFNγ) secretion by pheripheral blood mononuclear cells (PBMCs) by at least three times more when compared to the IFNγ secretion by the PBMCs in the absence of the isolated antibody.

18. The isolated antibody of claim **12**, wherein the protease that cleaves the wild type IgG1 molecule between or at residues 222-237 is matrix metalloprotease (MMP) 2 (MMP-2), MMP-3, MMP-7, MMP-9, MMP-12, MMP-13, immunoglobulin degrading enzyme from *Strep. Pyrongenes* (IdeS), or glutamyl endopeptidase I from *Staph. aureus* (GluV8), human neutrophil elastase (HNE), plasmin, cathepsin G, or pepsin.

19. The isolated antibody of claim **18**, wherein the protease that cleaves the wild type IgG1 molecule between or at residues 222-237 is MMP-3, MMP-7, MMP-12, MMP-13, IdeS, or GluV8.

20. The isolated antibody of claim **11**, wherein the antibody comprises the polypeptide sequence of SEQ ID NOs: 8, 10-15 or 18-20.

21. The isolated antibody of claim **11**, wherein the antibody binds to an antigen on a tumor cell, tumor matrix, or tumor vasculature.

22. The antibody of claim **21**, wherein the antibody binds CD20, ErbB1, ErbB2, ErbB3, VEGF, RON, or tissue factor.

23. A pharmaceutical composition comprising the isolated modified Fc-domain containing molecule of claim **1** or the isolated antibody of claim **11**.

24. The isolated antibody of claim **11**, wherein the CH2 domain comprises the substitution S239D/K326A/E333A having the polypeptide sequence of SEQ ID NO: 19.

25. The isolated antibody of **claim 24, wherein the antibody** binds CD20, ErbB1, ErbB2, ErbB3, VEGF, RON, or tissue factor.

26. The isolated antibody of **claim 25, wherein the antibody** binds CD20 or tissue factor.

27. The isolated antibody of **claim 26, wherein the antibody** binds tissue factor.