CLAIMS

1. A method for suppressing T cell activation which comprises contacting a cell population comprising T cells *in vitro* or *ex vivo* with an effective amount of STRO-1^+ cells and/or soluble factors derived therefrom to suppress T cell activation.

2. A method according to Claim 2, in which the cell population is a peripheral blood mononuclear cell sample.

3. A method according to Claim 2, in which the cell population comprise CD25+ CD4+ T cells of a naïve phenotype (CD45RA$^+$).

4. A method according to any of Claims 1 to 3, which comprises contacting the cell population comprising T cells *in vitro* or *ex vivo* with an effective amount of STRO-1^+ cells and/or soluble factors derived therefrom and one or more factors which induce formation of regulatory T cells.

5. A method according to Claim 4, in which the one or more factors which induce formation of regulatory T cells is selected from the group consisting of α-melanocyte-stimulating hormone (α-MSH), transforming growth factor-β2 (TGF-β2), vitamin D3 and/or Dexamethasone.

6. A method according to any of Claims 1 to 4, which further comprises contacting the cell population comprising T cells with one or more agents selected from the group consisting of interleukins, antigens, antigen presenting cells, lectins, and antibodies or specific ligands for a cell surface receptors or combinations thereof.

7. A method according to Claim 6, in which the interleukin is IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18 or combinations thereof.

8. A composition of T cells obtained by the method of any of Claims 1 to 7.

9. A composition comprising T cells, STRO-1^+ cells and/or soluble factors derived therefrom, one or more factors which induce formation of regulatory T cells and a pharmaceutically acceptable carrier.

10. Use of a cell population comprising T cells treated with an effective amount of STRO-1^+ cells and/or soluble factors derived therefrom to suppress T cell activation in the preparation of a medicament for the treatment of an autoimmune disorder.

11. Use of an amount of STRO-1^+ cells and/or soluble factors derived therefrom effective to suppress T-cell activation in a patient in the preparation of a medicament for treating or preventing a disorder caused by excessive or aberrant T cell activation.

12. Use according to Claim 10 or Claim 11, in which the amount of STRO-1^+ cells comprises between 0.1 x 10^6 to 5 x 10^6 STRO-1^+ cells and/or progeny thereof.

13. Use according to any of Claims 10 to 12, in which the amount of STRO-1^+ cells comprises between 0.3 x 10^6 to 2 x 10^6 STRO-1^+ cells and/or progeny thereof.

14. Use according to any of Claims 10 to 12, in which the amount of STRO-1^+ cells and/or progeny thereof comprises a low dose of STRO-1^+ cells and/or progeny thereof.

15. Use according to Claim 14, in which the low dose of STRO-1^+ cells and/or progeny thereof comprises between 0.1 x 10^5 and 0.5 x 10^6 STRO-1^+ cells and/or progeny thereof.

16. Use according to Claim 14, in which the low dose of STRO-1^+ cells and/or progeny thereof comprises about 0.3 x 10^6 STRO-1^+ cells and/or progeny thereof.

17. Use according to any of Claims 10 to 16, in which the treatment further comprises administering to the subject one or more agents selected from the group consisting of interleukins, antigens, antigen presenting cells, lectins, and antibodies or specific ligands for a cell surface receptors or combinations thereof.

18. Use according to Claim 17, in which the interleukin is IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18 or combinations thereof.

19. Use according to any of Claims 10 to 18, further comprising administering an immunosuppressive drug to the subject.

20. A method or use according to any of Claims 1 to 19, in which the STRO-1^+ cells are enriched for STRO-1^{bright} cells.

21. A method or use according to any of Claims 1 to 20, in which the STRO-1^{bright} cells and/or progeny thereof are allogeneic.

CLAIMS

1. A method for suppressing T cell activation which comprises contacting a cell population comprising T cells *in vitro* or *ex vivo* with an effective amount of a population of cells enriched for cells expressing STRO-1^{bright} and/or soluble factors derived therefrom to suppress T cell activation.

2. A method according to Claim 1, in which the cell population is a peripheral blood mononuclear cell sample.

3. A method according to Claim 2, in which the cell population comprises CD25+ CD4+ T cells of a naïve phenotype (CD45RA^{+}).

4. A method according to any of Claims 1 to 3, which comprises contacting the cell population comprising T cells *in vitro* or *ex vivo* with an effective amount of a population of cells enriched for cells expressing STRO-1^{bright} and/or soluble factors derived therefrom and one or more factors which induce formation of regulatory T cells.

5. A method according to Claim 4, in which the one or more factors which induce formation of regulatory T cells is selected from the group consisting of α-melanocyte-stimulating hormone (α-MSH), transforming growth factor-β2 (TGF-β2), vitamin D3 and/or Dexamethasone.

6. A method according to any of Claims 1 to 5, which further comprises contacting the cell population comprising T cells with one or more agents selected from the group consisting of interleukins, antigens, antigen presenting cells, lectins, and antibodies or specific ligands for a cell surface receptors or combinations thereof.

7. A method according to Claim 6, in which the interleukin is IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18 or combinations thereof.

8. A composition of T cells obtained by the method of any of Claims 1 to 7.

9. A composition comprising T cells, a population of cells enriched for cells expressing STRO-1^{bright} and/or soluble factors derived therefrom, one or more factors which induce formation of regulatory T cells and a pharmaceutically acceptable carrier.

10. Use of a cell population comprising T cells treated *in vitro* or *ex vivo* with an effective amount of a population of cells enriched for cells expressing STRO-1^{bright} and/or soluble factors derived therefrom to suppress T cell activation in the preparation of a medicament for the treatment of an autoimmune disorder.

11. Use according to Claim 10, in which the amount of a population of cells enriched for cells expressing STRO-1^{bright} comprises between 0.1 x 10^6 to 5 x 10^6 STRO-1^{bright} cells and/or progeny thereof.

12. Use according to any of Claim 10or 11, in which the amount of a population of cells enriched for cells expressing STRO-1^{bright} comprises between 0.3 x 10^6 to 2 x 10^6 STRO-1^{bright} cells and/or progeny thereof.

13. Use according to Claim 10, in which the amount of a population of cells enriched for cells expressing STRO-1^{bright} and/or progeny thereof comprises between 0.1 x 10^5 and 0.5 x 10^6 STRO-1^{bright} cells and/or progeny thereof.

14. Use according to Claim 10, in which the amount of a population of cells enriched for cells expressing STRO-1^{bright} and/or progeny thereof comprises about 0.3 x 10^6 STRO-1^{bright} cells and/or progeny thereof.

15. Use according to any of Claims 10 to 14, in which the treatment further comprises administering to the subject one or more agents selected from the group consisting of interleukins, antigens, antigen presenting cells, lectins, and antibodies or specific ligands for a cell surface receptors or combinations thereof.

16. Use according to Claim 15, in which the interleukin is IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IL-16, IL-17, IL-18 or combinations thereof.

17. Use according to any of Claims 10 to 16, further comprising administering an immunosuppressive drug to the subject.

18. A method or use according to any of Claims 1 to 17, in which the STRO-1^{bright} cells and/or progeny thereof are allogeneic.