CLAIMS:

1. A method for obtaining a population of human Treg cells comprising the steps of: (a) culturing a population of human monocytes in presence of interleukin-34 (IL-34) polypeptide in order to obtain a population of immunosuppressive macrophages; (b) co-culturing a population of human peripheral blood mononuclear cells (PBMCs) and the population of immunosuppressive macrophages obtained at step (a); and (c) optionally isolating the population of human Treg cells obtained at step (b).

2. The method of claim 1 wherein the population of immunosuppressive macrophages are allogeneic to the population of human PBMCs.

3. An isolated population of human Treg cells obtainable by the method of claim 1.

4. The isolated population of human Treg cells of claim 3 wherein said Treg cells are $CD4^+$ $Foxp3^+$ Treg cells and/or $CD8^+$ $Foxp3^+$ Treg cells.

5. The isolated population of human Treg cells of claim 3 wherein said Treg cells are $CD4^+CD45RC^{low}$ Treg cells and/or $CD8^+CD45RC^{low}$ Treg cells.

6. The isolated population of human Treg cells of claim 3 for use as drug.

7. The isolated population of human Treg cells of claim 3 for use in the prevention or treatment of an immune and/or inflammatory disease or condition.

8. The isolated population of human Treg cells for use according to claim **7**, wherein the immune/inflammatory disease or condition is selected from the group comprising graft rejection and GVHD.

9. Use of IL-34 for obtaining an enriched population of Tregs from a population of PBMCs or for obtaining a population of immunosuppressive macrophages.

10. A population of immunosuppressive macrophages obtained at step (a) of the method of claim 1.

11. The population of immunosuppressive macrophages of claim 10 for use as drug.

12. The population of immunosuppressive macrophages of claim 10 for use in the prevention or treatment of an immune and/or inflammatory disease or condition.

13. The population of immunosuppressive macrophages for used according to claim **12**, wherein the immune/inflammatory disease or condition is selected from the group comprising graft rejection and GVHD.

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