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(54) **Title:** A RECOMBINANT METHOD FOR PRODUCTION OF AN ERYTHROPOIESIS STIMULATING PROTEIN

(57) **Abstract:** The present invention relates to the recombinant method used for the production of a highly glycosylated form (in total five N linked glycosylations as opposed to three N linked glyosylations in the natural EPO) of erythropoietin. The added sites for glycosylation will result in greater number of carbohydrate chains, and higher sialic acid content than human EPO, which in turn would impart to the recombinant molecule a longer half-life. The invention further relates to the construction of expression cassettes comprising nucleic acid sequences encoding for the highly glycosylated form of Erythropoietin and stable expression in the host cells. The invention further relates to the optimized method for purification of the erythropoiesis stimulating protein. The recombinant EPO according to the invention, and the salts and functional derivatives thereof, may comprise the active ingredient of pharmaceutical compositions for an increase in the hematocrit for treatment of anemia and for restoration of patient well being and quality of life.

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