

TPO

Thrombopoietin, Megakaryocyte colony stimulating factor human, recombinant, *E. coli*

Cat. No.	Amount
PR-687	10 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized.

Solubility

It is recommended to reconstitute the lyophilized TPO in sterile bidest H₂O not less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

ED₅₀: < 1 ng/ml, corresponding to a specific activity of 1 x 10⁶ IU/mg, determined by the dosedependent stimulation of MO7e cells.

Endotoxin

Less than 0.1 ng/µg (IEU/µg) of TPO.

Purity

≥ 95% by SDS-PAGE, RP-HPLC and FPLC

Description

Thrombopoietin (TPO) and the TPO receptor (Mpl) are the key regulators of platelet mass and are required for both stem cell proliferation and for the terminal differentiation of platelets.

TPO may be a potent regulator of ovarian function (e.g. proliferation, apoptosis and the secretion of peptide hormones, steroids, growth factors and growth factor-binding protein, as well as of the expression of some intracellular messengers). Furthermore the importance of PKA in controlling these functions and in mediating the effects of TPO on ovarian cells was demonstrated.

Recombinant human Thrombopoietin produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 174 amino acids and having a molecular mass of 18.6 kDa which comprises the receptor binding domain of the Mpl-ligand protein.

Recombinant human Thrombopoietin is purified by proprietary chromatographic techniques.

Selected References:

- Moliterno *et al.* (2004) Mpl Baltimore: a thrombopoietin receptor polymorphism associated with thrombocytosis. *Proc. Natl. Acad. Sci. USA.* **101**:11444.
- Rice (2004) Danazol, idiopathic thrombocytopenic purpura, and thrombopoietin. *Am. J. Med.* **117**:972.
- Sirotkin *et al.* (2004) Thrombopoietin regulates proliferation, apoptosis, secretory activity and intracellular messengers in porcine ovarian follicular cells: involvement of protein kinase A. *J. Endocrinol.* **183**:595.
- Randi *et al.* (2005) Normal thrombopoietin and its receptor (c-mpl) genes in children with essential thrombocythemia. *Pediatr. Blood Cancer.* **44**:47.
- Orita *et al.* (2005) A novel therapeutic approach for thrombocytopenia by minibody agonist of the thrombopoietin receptor. *Blood.* **105**:562.
- Sung *et al.* (2004) Effect of sodium butyrate on the production, heterogeneity and biological activity of human thrombopoietin by recombinant Chinese hamster ovary cells. *J. Biotechnol.* **112**:323.