



Anti-Human TPO

20150223ML



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	102-P89G
Size:	100 µg
Lot. No.:	According to product label

Preparation: Produced from sera of goats pre-immunized with highly pure (>98%) recombinant hTPO. Anti-Human TPO specific antibody was purified by affinity chromatography employing immobilized hTPO matrix.

Target Background

Synonyms (Target):	TNF; DIF; TNFA; TNFSF2; TNF-alpha
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Thrombopoietin (Tpo), is a key regulator of megakaryocytopoiesis and thrombopoiesis. It is principally produced in the liver and is bound and internalized by the receptor Tpo R/cmpl. Defects in the TpoTpo R signaling pathway are associated with a variety of platelet disorders. The 353 amino acid (aa) human Tpo precursor is cleaved to yield the 332 aa mature protein. Mature human Tpo shares approximately 70% aa sequence homology with mouse and rat Tpo. It is an 80-85 kDa protein that consists of an N-terminal domain with homology to Erythropoietin (Epo) and a C terminal domain that contains multiple N linked and O linked glycosylation sites. Tissue specific alternate splicing of human Tpo generates multiple isoforms with internal deletions, insertions, and/or C-terminal substitutions. Tpo promotes the differentiation, proliferation, and maturation of MK and their progenitors. Several other cytokines can promote these functions as well but only in cooperation with Tpo. Notably, IL3 independently induces MK development, although its effects are restricted to early in the MK lineage. Tpo additionally promotes platelet production, aggregation, ECM adhesion, and activation. It is cleaved by plateletderived thrombin following Arg191 within the Cterminal domain and subsequently at other sites upon extended digestion. Full length Tpo and shorter forms circulate in the plasma. The C-terminal domain is not required for binding to Tpo R or inducing MK growth and differentiation. Aside from its hematopoietic effects, Tpo is expressed in the brain where it promotes the apoptosis of hypoxiasensitized neurons and inhibits neuronal differentiation by blocking NGF induced signaling.

Database References Target

Protein RefSeq:	NP_000451.1
Uniprot ID:	P40225
mRNA RefSeq:	NM_000460.2

Product Specifications

Species reactivity	Human
Clone/Ab feature	Goat IgG
Cross reactivity	Human
Host	Goat
Clonality	Polyclonal Antibody
Purification	Antigen-affinity purified
Immunogen	recombinant human TPO
Formulation	lyophilized from PBS
Reconstitution buffer	water

Reconstitution: Reconstitute the antibody in sterile water to a concentration of 0.1 - 1.0 mg/ml.

Stability: The lyophilized antibody is stable for at least 2 years from date of receipt at -20°C. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Neutralization: To yield one-half maximal inhibition [ND₅₀] of the biological activity of hTPO (5.00 ng/ml), a concentration of 0.05 – 0.08 µg/ml of this antibody is required.

Sandwich ELISA: To detect hTPO by sandwich ELISA (using 100 µl/well antibody solution) a concentration of 0.5 - 2.0 µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with compatible secondary reagents, allows the detection of at least 0.2 - 0.4 ng/well of recombinant hTPO.

Western Blot: To detect hTPO by Western Blot analysis this antibody can be used at a concentration of 0.1-0.2 µg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant hTPO is 1.5-3.0 ng/lane, under either reducing or non-reducing conditions.

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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