3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

ANTI-THROMBOPOIETIN (TPO)
Developed in Goat
IgG Fraction of Antiserum

Product Number **T 4805**

Product Description

Anti-Human Thrombopoietin is developed in goats using recombinant human Tpo, expressed in the insect cell line *Sf 21*, as the immunogen. The product is purified by Protein G affinity chromatography.

Tpo, the ligand for the receptor encoded by the *c-Mpl* proto-oncogene, acts as a stimulator of the development of megakaryocyte precursors of platelets. Similar to erythropoietin, Tpo leads to an increase in the number of circulating platelets. Tpo affects the entire thrombopoietic process, with stronger effects in the later stages. Other thrombopoietic cytokines include stem cell factor (SCF), IL-3, IL-6, and IL-11.

Tpo is an approximately 35 kDa polypeptide of 335 amino acids. However, due to glycosylation the protein has an apparent molecular weight of 75 kDa in SDS-PAGE. The precursor form of Tpo consists of 356 amino acids. To generate the mature Tpo (335 amino acids), the precursor cleaves a 21 amino acid signal peptide. Human, mouse and dog Tpo shows 69-75% amino acid homology.

Reagents

Goat Anti-Human Tpo is provided lyophilized from phosphate buffered saline, to which no preservatives are added.

Reconstitution

To one vial of lyophilized powder, add 1 ml of 0.2 µm-filtered PBS to produce a 1 mg/ml stock solution of Anti-Human Tpo. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at –20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Avoid repeated freezing and thawing.

Product Profile

Anti-Human Thrombopoietin is tested for its ability to neutralize the biological activity of recombinant human Tpo on the human cell line, MO7e. The ND_{50} of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of recombinant human Tpo, when recombinant human Tpo is present at a concentration just high enough to elicit a maximum response. In this bioassay, 10 ng/ml rhTpo was mixed with various dilutions of the antibody for 1 hour at 37 °C. After preincubation, the antigen-antibody mixture was added to MO7e cells in a 96-well plate. The assay mixture was incubated at 37 °C for 72 hours in a humidified CO_2 incubator and pulsed for the final 4 hours with ^{3}H-thymidine. Cells were harvested onto glass filters and the ^{3}H-thymidine incorporation into DNA was measured.

The antibody may also be used in immunoblotting and ELISA. In addition, the antibody does not cross-react with other cytokines tested.*

* rhANG, rhAR, rhB7-1, rhB7-2, rmB7-2, rhBTC, rhβ-NGF, rhBDNF, rmC10, rhCD4, rhCD8, rhCD28, rhCNTF, rrCNTF, rhEGF, rhENA-78, rhEpo, rhFGFa, rhFGFb, rhFGF-4, rhFGF-5, rhFGF-6, rhFGF-7, rhFGF-9, rhG-CSF, rmG-CSF, rhGM-CSF, rhGM-CSF Rα, rmGM-CSF, rhGROα, rhGROβ, rhGROγ, rhHB-EGF, rhHRG-α, rhHGF, rhI-309, rhIFN-γ, rhIGF-I, rhIGF-I R, rhIGF-II, rhIL-1α, rhIL-1 RI, rhIL-1 RII, rmIL-1α, rhIL-1β, rmIL-1β, rhIL-1 ra, rmIL-1 ra, rhIL-2, rhIL-2 sRα, rhIL-2 sRβ, rhIL-2 sRγ, rmIL-2, rhIL-3, rhIL-3 sRα, rmIL-3, rhIL-4, rhIL-4 sR, rmIL-4, rhIL-5, rhIL-5 sRα, rhIL-5 sRβ, rmIL-5, rhIL-5, rhIL-6, rhIL-6 sR, rmIL-6, rhIL-7, rhIL-7 R, rmIL-7, rhIL-8, rhIL-9, rmIL-9, rhIL-10, rhIL-10 sR, rmIL-10, rhIL-11, rhIL-12, rmIL-12, rhIL-13, rmIL-13, rhIL-15, rhIP-10, rhJAK-1, rmJAK-1, rmJE, rhLIF, rhLIF R, rmLIF, rhM-CSF, rmM-CSF, rhMCP-1, rhMCP-1 R, rhMCP-2, rhMCP-3, rhMidkine,

rhMIP-1α, rmMIP-1α, rhMIP-1β, rmMIP-1β, rmMIP-2, rhNT-3, rhNT-4, rhOSM, rhPD-ECGF, hPDGF, pPDGF, rhPDGF-AA, rhPDGF-AB, rhPDGF-BB, rhPDGF Rα, rhP*l*GF, rhPTN, rhRANTES, rhSCF, rmSCF, rhsgp130, rhSLPI, rhSTAT-1, rmSTAT-4, hTfR, rhTGF-α, rhTGF-β1, rhTGF-β2, rhTGF-β3, raTGF-β5, rhLAP (TGF-β1), rhLatent TGF-β1, rhTGF-β sRII, rhTGF-β sRIII, rhTNF-α, rmTNF-α, rhTNF-β, rhsTNF RI, rhsTNF RII, rhVEGF.

JWM/KMR 06/02