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ProductInformation

Anti-Thrombopoietin
produced in goat, affinity isolated antibody

Catalog Number **T4930**

Product Description

Anti-Thrombopoietin (TPO) is developed in goats using as the immunogen recombinant mouse TPO, expressed in NOS cells. The product is affinity isolated.

TPO, the ligand for the receptor encoded by the *c-Mpl* protooncogene, 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. It 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 ~35 kDa polypeptide of 335 amino acids. However, due to glycosylation, the protein has an apparent MW 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 show 69-75% amino acid homology.

Reagent

Supplied lyophilized from phosphate buffered saline, pH 7.4, containing 5% trehalose.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm filtered PBS to produce a 100 µg/ml stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Product Profile

Anti-Thrombopoietin is tested for its ability to neutralize the biological activity of recombinant mouse TPO on the human cell line, MO7e.[1] The ND_{50} of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of the bioactivity of recombinant mouse TPO, when recombinant mouse TPO is present at a concentration just high enough to elicit a maximum response.

The antibody may also be used in immunoblotting and ELISA. By ELISA, the antibody shows <15% cross-reactivity with recombinant human TPO.

Bioassay

3 ng/ml rmTPO was mixed with various dilutions of antibody in a 96 well plate for 1 hour at 37 °C. After pre-incubation, human MO7e cells were added to the antigen-antibody mixture. The assay mixture was incubated at 37 °C for 72 hours in a humidified CO_2 incubator and pulsed during the final 4 hours with ^{3}H-thymidine. Cells were harvested onto glass filters and the ^{3}H-thymidine incorporation into DNA was measured.

Reference

1. Avanzi, G., et al., *Br. J. Haematol.*, **69**, 359 (1988).

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