

## DESCRIPTION

|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Mouse   |
| <b>Specificity</b>        | Detects mouse Thrombopoietin R/Tpo R in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human Tpo R is observed and less than 2% cross-reactivity with recombinant mouse Epo R is observed. |
| <b>Source</b>             | Polyclonal Goat IgG   |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse Thrombopoietin R/Tpo R<br>Ser18-Trp483<br>Accession # CAA52031  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.                                     |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                     | Recommended Concentration | Sample  |
|---------------------|---------------------------|---|
| <b>Western Blot</b> | 0.1 µg/mL                 | Recombinant Mouse Thrombopoietin R/Tpo R Fc Chimera (Catalog # 1317-TR) |

## PREPARATION AND STORAGE

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.2 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

## BACKGROUND

Thrombopoietin receptor (Tpo R), also known as myeloproliferative leukemia protein (*c-mpl*), is a type I membrane protein that is a member of the hematopoietin/cytokine receptor superfamily. Thrombopoietin (Tpo) is a key regulator of megakaryocytopoiesis and thrombopoiesis *in vitro* and *in vivo*. Receptor dimerization occurs upon ligand binding. Downstream signaling cascades utilize the Ras/MAP and JAK/STAT pathways (1). In humans, variations at the 3' end on the molecule result in the formation of 3 distinct mRNA species, a P-form, a K-form, and a potentially secreted form. The predominant form in humans is the P-form, which encodes a full length receptor. In mouse, mRNA for a full length form, a potentially secreted form, and a form lacking 8 amino acids in the extra-cytoplasmic domain has been detected (2). The human and mouse receptors share approximately 81% amino acid identity. Tpo R is expressed at low levels in various cell types including hematopoietic progenitor cells, megakaryocytes and platelets.

### References:

1. Kuter, D.J. and J. Li (2001) in *Cytokine Reference*, p. 1953. Oppenheim, J.J. and M. Feldmann eds. Academic Press.
2. Kaushansky, K. and J.G. Drachman (2002) *Oncogene* **21**:3359.