IBL Data Sheet

Code No. 10401

Anti-Mouse
c-MPL/TPOR (AMM2) Rat IgG MoAb

Volume : 100 µg

Introduction : Thrombopoietin promotes the growth and differentiation (proliferation) of megakaryocytes which produce platelets. TPOR (Thrombopoietin receptor), which is also called c-MPL (Myeloproliferative leukemia protein) or CD110, is a receptor for thrombopoietin. And it is suggested that TPOR may also play a role in the maintenance of hematopoietic stem cells, which are stem cells located within the bone marrow that have the potential to develop into red blood cells, white blood cells, megakaryocytes and platelets. This receptor is activated when thrombopoietin protein binds to it, and the activated receptor stimulates a signaling pathway called the JAK/STAT pathway, which transmits signals from outside the cell to the cell's nucleus and is important for controlling the production of blood cells.
This antibody specifically reacts with mouse c-MPL/TPOR protein, and has neutralization activity to the reaction with thrombopoietin ligand (ref. 5).

Antigen : Recombinant protein of mouse c-MPL extracellular domain

Source : Mouse-Rat hybridoma
(P3X63-Ag.8.653 × Wistar rat spleen cells, supernatant)

Clone : AMM2 **Subclass** : IgG_1

Purification : Affinity purified with Protein G

Form : Lyophilized product in PBS containing 1 % BSA and 0.05 % NaN_3

How to use : 1.0 mL deionized water will be added to the product, then its concentration comes to 100 µg/mL

Stability : Lyophilized product, 5 years at 2 - 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for western blotting in concentration of 1 - 2 µg/mL.
: This antibody can be used for immuno-precipitation in concentration of 1 - 2 µg /test.
: This antibody can be used for flow cytometry in concentration of about 1 µg /mL.
: This antibody has a neutralization activity (refer to ref. 5).
As this product contains NaN_3, request customized form for neutralization test.

Specificity : Reacts with mouse c-MPL/TPOR.

Reference :

1. Ivanova A, Wuerfel J, Zhang J, Hoffmann O, Ballmaier M, Dame C. Expression pattern of the thrombopoietin receptor (Mpl) in the murine central nervous system. BMC Dev Biol. 2010 Jul 28;10:77.
2. Hosokawa K, Arai F, Yoshihara H, Iwasaki H, Hembree M, Yin T, Nakamura Y, Gomei Y, Takubo K, Shiama H, Matsuoka S, Li L, Suda T. Cadherin-based adhesion is a potential target for niche manipulation to protect hematopoietic stem cells in adult bone marrow. Cell Stem Cell. 2010 Mar 5;6(3):194-8.
3. Ghinassi B, Zingariello M, Martelli F, Lorenzini R, Vannucchi AM, Rana RA, Nishikawa M, Migliaccio G, Mascarenhas J, Migliaccio AR. Increased differentiation of dermal mast cells in mice lacking the Mpl gene. Stem Cells Dev. 2009 Sep;18(7):1081-92.
4. Huang X, Sakamoto H, Ogawa M. Thrombopoietin controls proliferation of embryonic multipotent hematopoietic progenitors. Genes Cells. 2009 Jul;14(7):851-60.
5. Yoshihara H, Arai F, Hosokawa K, Hagiwara T, Takubo K, Nakamura Y, Gomei Y, Iwasaki H, Matsuoka S, Miyamoto K, Miyazaki H, Takahashi T, Suda T. Thrombopoietin/MPL signaling regulates hematopoietic stem cell quiescence and interaction with the osteoblastic niche. Cell Stem Cell. 2007 Dec 13;1(6):685-97.
6. Miyakawa Y, Rojnuckarin P, Habib T, Kaushansky K. Thrombopoietin induces phosphoinositol 3-kinase activation through SHP2, Gab, and insulin receptor substrate proteins in BAF3 cells and primary murine megakaryocytes. J Biol Chem. 2001 Jan 26;276(4):2494-502.

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