Revision 1

Store at -20C

#12712

Phospho-TPOR (Tyr626) (D3H7B) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	85-90	Rabbit IgG	#P40238	4352

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-TPOR (Y626) (D3H7B) Rabbit mAb recognizes endogenous levels of TPOR protein only when phosphorylated at Tyr626. This antibody cross-reacts with a 30 kDa protein of unknown origin. This antibody may cross-react with some tyrosine-phosphorylated proteins including the EGF Receptor, ROS1, and FLT3.

Species predicted to react based on 100% sequence homology

Mouse, Rat, Monkey, Bovine

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr626 of human TPOR protein.

Background

Thrombopoietin receptor (TPOR, c-Mpl) is a hematopoietic receptor that binds the growth factor, thrombopoietin (TPO), responsible for regulation of platelet production (1-3). Expression of TPOR by megakaryocytes is required for megakaryocyte growth and development (4). TPOR is also expressed by hematopoietic stem cells and is required for stem cell maintenance and expansion (5). Studies show that mice lacking either TPOR or TPO have severely reduced numbers of platelets and megakaryocytes as well as decreased numbers of other hematopoietic lineages (4,5). Binding of TPO to TPOR induces receptor dimerization that leads to phosphorylation and activation of the tyrosine kinase Jak2. Activated Jak2 associates with the cytoplasmic domain of TPOR (6,7) and phosphorylates TPOR at Tyr626 and Tyr631 (8). These phosphorylated tyrosine residues provide docking sites for downstream signaling molecules including Stat3, Stat5, Shc, and SHIP (7-9).

Background References

1. Lok, S. et al. (1994) *Nature* 369, 565-8.
2. Kaushansky, K. et al. (1994) *Nature* 369, 568-71.
3. Wendling, F. et al. (1994) *Nature* 369, 571-4.
4. Gurney, A.L. et al. (1994) *Science* 265, 1445-7.
5. Alexander, W.S. et al. (1996) *Blood* 87, 2162-70.
6. Alexander, W.S. et al. (1995) *EMBO J* 14, 5569-78.
7. Drachman, J.G. et al. (1995) *J Biol Chem* 270, 4979-82.
8. Drachman, J.G. and Kaushansky, K. (1997) *Proc Natl Acad Sci U S A* 94, 2350-5.
9. Gurney, A.L. et al. (1995) *Proc Natl Acad Sci U S A* 92, 5292-6.
10. Bacon, C.M. et al. (1995) *FEBS Lett* 370, 63-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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