

Tie2 (AB33) Mouse mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H B	Endogenous	160	Mouse IgG1	#Q02763	7010

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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

Tie2 (AB33) Mouse mAb detects endogenous levels of Tie2 in various endothelial cell lines. It does not cross-react with related proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant Tie2 protein fragments corresponding to the extracellular domain of human Tie2.

Background

Tie2/Tek is a receptor tyrosine kinase (RTK) expressed almost exclusively on endothelial cells. It is critical for vasculogenesis and could be important for maintaining endothelial cell survival and integrity in adult blood vessels as well as tumor angiogenesis (1-3). A family of ligands known as the angiopoietins binds to Tie2. Interestingly, these ligands appear to have opposing actions; Angiopoietin-1 (Ang1) and Angiopoietin-4 (Ang4) stimulate tyrosine phosphorylation of Tie2; Angiopoietin-2 (Ang2) and Angiopoietin-3 (Ang3) can inhibit this phosphorylation (4,5). Downstream signaling components, including Grb2, Grb7, Grb14, SHP-2, the p85 subunit of phosphatidylinositol 3-kinase, and p56/Dok-2 interact with Tie2 in a phosphotyrosine-dependent manner through their SH2 or PTB domains (6,7). Tyr992 is located on the putative activation loop of Tie2 and is a major autophosphorylation site (8).

Background References

1. Ward, N.L. and Dumont, D.J. (2002) *Semin. Cell Dev. Biol.* 13, 19-27.
2. Jones, N. and Dumont, D.J. (2000) *Cancer Metastasis Rev.* 19, 13-17.
3. Partanen, J. and Dumont, D.J. (1999) *Curr. Top. Microbiol. Immunol.* 237, 159-172.
4. Ellis, L. M. et al. (2002) *Oncology* 16, 31-35.
5. Koh, G. Y. et al. (2002) *Exp. Mol. Med.* 34, 1-11.
6. Jones, N. et al. (1999) *J. Biol. Chem.* 274, 30896-30905.
7. Jones, N. et al. (2003) *Mol. Cell. Biol.* 23, 2658-2668.
8. Murray, B. W. et al. (2001) *Biochem.* 40, 10243-10253.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **B:** Bovine

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