

#4226 Store at -20°C

Phospho-Tie2 (Ser1119) Antibody


Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Transfected Only	160	Rabbit	#Q02763	7010

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

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

Specificity / Sensitivity

Phospho-Tie2 (Ser1119) Antibody detects transfected levels of Tie2 protein only when phosphorylated at serine 1119.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser1119 of human Tie2. Antibodies are purified by protein A and peptide affinity chromatography.

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). Phosphorylation of Ser1119 at the carboxy-terminus of Tie2 results in an increase of Tie2 kinase activity (personal communication with Dr. Chris Kontos, Duke University).

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

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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