Phospho-Tie2 (Tyr992) Antibody

#4221 Store at -20°C

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rev. 01/20/16

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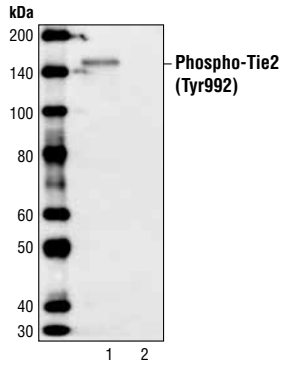
Entrez-Gene ID #7010
Swiss-Prot Acc. #Q02763

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Transfected	H, (M)	160 kDa	Rabbit**

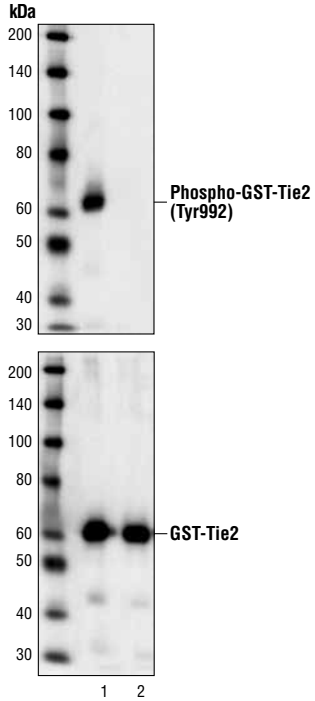
Background: Tie2/Tek is a receptor tyrosine kinase (RTK) expressed almost exclusively on endothelial cells. It is critical for vasculogenesis and could be important for maintaining endothelial cell survival and integrity in adult blood vessels as well as tumor angiogenesis (1-3). A family of ligands known as the angiopoietins binds to Tie2. Interestingly, these ligands appear to have opposing actions, as Angiopoietin-1 (Ang1) and Angiopoietin-4 (Ang4) stimulate tyrosine phosphorylation of Tie2, whereas Angiopoietin-2 (Ang2) and Angiopoietin-3 (Ang3) can inhibit this phosphorylation (4,5). Downstream signaling components, including Grb2, Grb7, Grb14, Shp2, 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).

Specificity/Sensitivity: Phospho-Tie2 (Tyr992) Antibody detects transfected levels of Tie2 protein only when phosphorylated at Tyr992.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr992 of human Tie2. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from 293 cells, transfected with wild-type Tie2 (lane 1) or mock-transfected (lane 2) using Phospho-Tie2 (Tyr992) Antibody. Tie2 is constitutively active when transfected into 293 cells.



Western blot analysis of extracts from Sf9 cells overexpressing GST-human Tie2 kinase domain fusion proteins, wild-type (lane 1) or kinase-dead (lane 2) using Phospho-Tie2 (Tyr992) Antibody (upper) or Tie2 antibody (lower). The wild-type Tie2 kinase domain is constitutively phosphorylated when overexpressed in Sf9 cells. The molecular weight of GST-Tie2 fusion is approximately 65 kDa. ▶

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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western Blotting	1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

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

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **IC**—Immunocytochemistry **IF**—Immunofluorescence **F**—Flow cytometry **E**—ELISA **D**—DELFIA®

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **X**—Xenopus **Z**—zebra fish **B**—bovine **All**—all species expected
Species enclosed in parentheses are predicted to react based on 100% sequence homology.