

TrkA Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #4914
Swiss-Prot Acc. #P04629

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R	140 kDa	Rabbit**

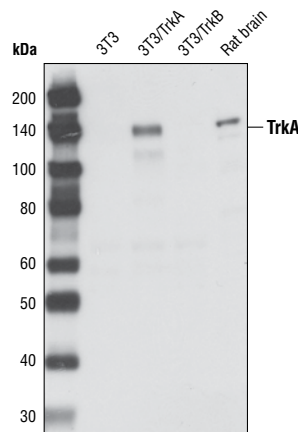
Background: The family of Trk receptor tyrosine kinases consists of TrkA, TrkB and TrkC. While the sequence of these family members is highly conserved, these family members are activated by different neurotrophins: TrkA by NGF, TrkB by BDNF or NT4, and TrkC by NT3. TrkA regulates proliferation and is important for development and maturation of the nervous system (1). Phosphorylation at Tyr490 is required for Shc association and activation of the Ras-MAP kinase cascade. Residues Tyr674/675 lie within the catalytic domain, and phosphorylation at this site reflects TrkA kinase activity (2-6). Point mutations, deletions and chromosomal rearrangements (chimera) cause ligand-independent receptor dimerization and activation of TrkA. Many malignancies (breast, colon, prostate and thyroid carcinomas and acute myeloid leukemia) have activated TrkA. Expression of TrkA is a good prognostic marker in neuroblastomas because it signals growth arrest and differentiation of cells originating from the neural crest (1).

Specificity/Sensitivity: TrkA Antibody detects endogenous levels of total TrkA protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to human TrkA. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Pierotti, M.A. and Greco, A. (2006) *Cancer Lett.* 232, 90-98.
- (2) Segal, R.A. and Greenberg, M.E. (1996) *Annu. Rev. Neurosci.* 19, 463-489.
- (3) Stephens, R.M. et al. (1994) *Neuron* 12, 691-705.
- (4) Obermeier, A. et al. (1993) *EMBO J.* 12, 933-941.
- (5) Obermeier, A. et al. (1994) *EMBO J.* 13, 1585-1590.
- (6) Yao, R. and Cooper, G.M. (1995) *Science* 267, 2003-2006.



Western blot analysis from various cell lysates and rat brain cell extracts, using TrkA Antibody.

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.

IMPORTANT: For western blots, incubate membrane with diluted 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 IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.