TrkA (14G6) Rabbit mAb

#2508 Store at –20°C

☑ 100 µl
(10 western blots)

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

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IHC-P	H	140 kDa	Rabbit IgG**
Endogenous			

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 (14G6) Rabbit mAb detects endogenous levels of total TrkA protein. This antibody does not cross-react with TrkB.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide surrounding Arg220 of human TrkA.

Background References:

(1) Pierotti, M.A. and Greco, A. (2006) *Cancer Lett.* 232, 90–98.

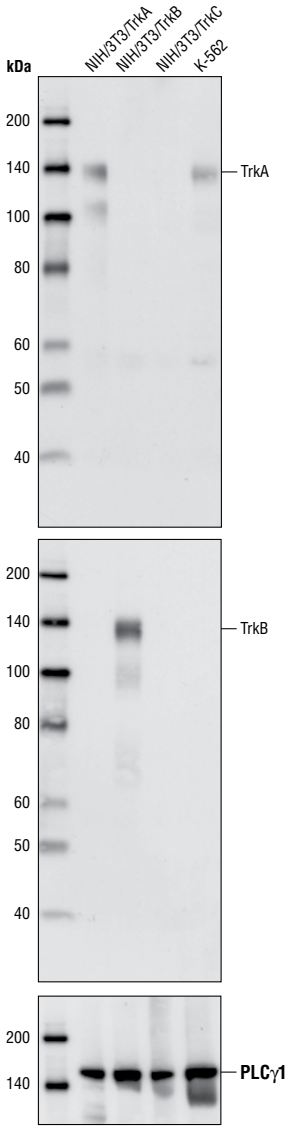
(2) Segal, R.A. and Greenberg, M.E. (1996) *Annu. Rev. Neurosci.* 19, 463–489.

(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 of extracts from NIH/3T3, NIH/3T3-TrkA, NIH/3T3-TrkB and NIH/3T3-TrkC and K562 cells using TrkA (14G6) Rabbit mAb (upper) TrkB (80G2) Rabbit mAb Antibody #4607 (middle) and PLCγ1 Antibody #2822 (lower).

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.

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
Immunohistochemistry (Paraffin)	1:200†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

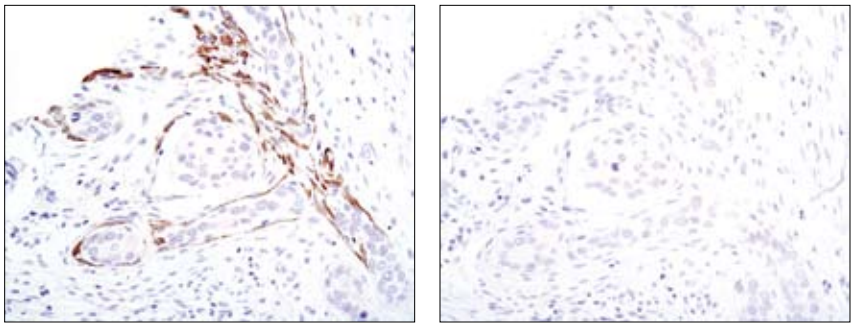
†*Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.*

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

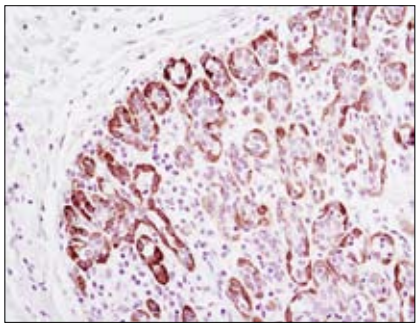
Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Trk A (14G6) Rabbit mAb #2508 in the presence of control peptide (left) or Trk A Blocking Peptide #1435 (right).



Immunohistochemical analysis of paraffin-embedded human breast using TrkA (14G6) Rabbit mAb.