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#92991

Trk (pan) (A7H6R) Rabbit mAb

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Entrez-Gene ID #4914
UniProt ID #P04629

New 10/16

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Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, R	120-140 kDa	Rabbit IgG**

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.

***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
Immunoprecipitation	1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Background: The family of Trk receptor tyrosine kinases consists of TrkA, TrkB, and TrkC. While the sequence of these family members is highly conserved, they are activated by different neurotrophins: TrkA by NGF, TrkB by BDNF or NT4, and TrkC by NT3 (1). Neurotrophin signaling through these receptors regulates a number of physiological processes, such as cell survival, proliferation, neural development, and axon and dendrite growth and patterning (1). In the adult nervous system, the Trk receptors regulate synaptic strength and plasticity. TrkA regulates proliferation and is important for development and maturation of the nervous system (2). Phosphorylation at Tyr490 is required for Shc association and activation of the Ras-MAP kinase cascade (3,4). Residues Tyr674/675 lie within the catalytic domain, and phosphorylation at these sites reflects TrkA kinase activity (3-6). Point mutations, deletions, and chromosomal rearrangements (chimeras) cause ligand-independent receptor dimerization and activation of TrkA (7-10). TrkA is activated in many malignancies including breast, ovarian, prostate, and thyroid carcinomas (8-13). Research studies suggest that expression of TrkA in neuroblastomas may be a good prognostic marker as TrkA signals growth arrest and differentiation of cells originating from the neural crest (10).

Background References:

(1) Huang, E.J. and Reichardt, L.F. (2003) *Annu Rev Biochem* 72, 609-42.

(2) Segal, R.A. and Greenberg, M.E. (1996) *Annu Rev Neurosci* 19, 463-89.

(3) Stephens, R.M. et al. (1994) *Neuron* 12, 691-705.

(4) Marsh, H.N. et al. (2003) *J Cell Biol* 163, 999-1010.

(5) Obermeier, A. et al. (1993) *EMBO J* 12, 933-41.

(6) Obermeier, A. et al. (1994) *EMBO J* 13, 1585-90.

(7) Arevalo, J.C. et al. (2001) *Oncogene* 20, 1229-34.

(8) Reuther, G.W. et al. (2000) *Mol Cell Biol* 20, 8655-66.

(9) Greco, A. et al. (1997) *Genes Chromosomes Cancer* 19, 112-23.

(10) Pierotti, M.A. and Greco, A. (2006) *Cancer Lett* 232, 90-8.

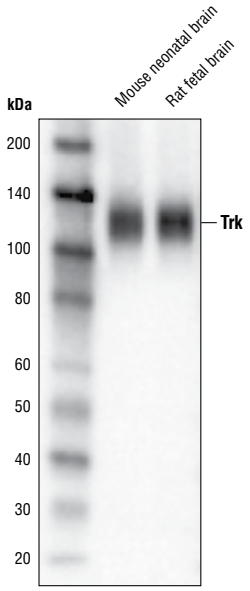
(11) Lagadec, C. et al. (2009) *Oncogene* 28, 1960-70.

(12) Greco, A. et al. (2010) *Mol Cell Endocrinol* 321, 44-9.

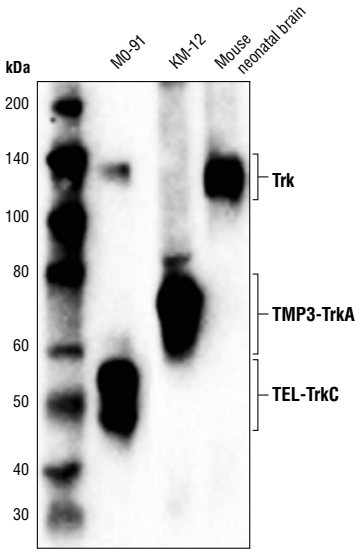
(13) Ødegaard, E. et al. (2007) *Hum Pathol* 38, 140-6.

Specificity/Sensitivity: Trk (pan) (A7H6R) Rabbit mAb detects endogenous levels of total Trk protein. This antibody detects TrkA, TrkB and TrkC. However, the antibody may perferentially detect TrkA over TrkB and TrkB over TrkC.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide surrounding Tyr791 of human TrkA.



Western blot analysis of extracts from mouse neonatal and rat fetal brain using Trk (pan) (A7H6R) Rabbit mAb.



Western blot analysis of extracts from M0-91, KM12 cells and mouse neonatal brain using Trk (pan) (A7H6R) Rabbit mAb.

U. S. Patent No. 5,675,063.

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

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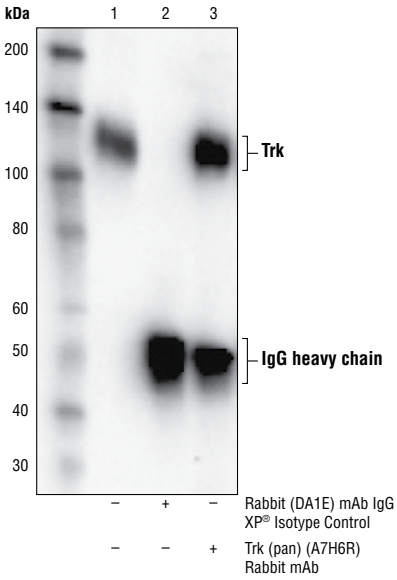
Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **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.



Immunoprecipitation of mouse neonatal brain extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP® Isotype Control #3900, and lane 3 is Trk (pan) (A7H6R) Rabbit mAb. Western blot analysis was performed using Trk (pan) (A7H6R) Rabbit mAb.