#4201 Store at -20°C

p75NTR (D8A8) Rabbit mAb

☑ 100 µl
(10 western blots)

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Entrez-Gene ID #4804
Swiss-Prot Acc. #P08138

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, R	75 kDa	Rabbit IgG**

Background: The p75 neurotrophin receptor (p75NTR), a member of the TNF receptor superfamily, is distinguished by multiple cysteine-rich ligand-binding domains, a single transmembrane sequence and a noncatalytic cytoplasmic domain (1). p75NTR displays paradoxical functions when acting alone or with other receptor proteins. Working in concert with Trk receptors, p75NTR recognizes neurotrophins and transmits trophic signals into the cell. Both p75NTR and TrkA are required to activate PI3K-Akt signaling, while TrkA can individually activate the MAP kinase pathway. In contrast, p75NTR, possibly through JNK, ensures appropriate apoptosis of injured neurons and improperly targeted neonatal neurons (2).

The p75NTR protein undergoes sequential cleavage similar to APP and Notch. First, α-secretase removes the p75NTR ectodomain, eliminating ligand-mediated signaling. At this point, the membrane-tethered cleavage product can still fine-tune Trk-mediated trophic actions. γ-secretase cleaves within the transmembrane domain to liberate the cytoplasmic tail from its membrane anchor and allow the p75NTR intracellular domain to translocate to the nucleus (3,4).

Specificity/Sensitivity: p75NTR (D8A8) Rabbit mAb detects endogenous levels of total p75NTR protein. It recognizes and unidentified protein at 42 kDa.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln240 of human p75NTR.

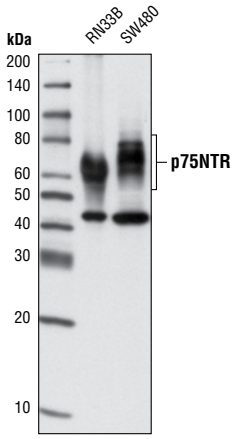
Background References:

(1) Chao, M.V. (2003) *Nat. Rev. Neurosci.* 4, 299-309.

(2) Nykjaer, A. et al. (2005) *Curr. Opin. Neurobiol.* 15, 49-57.

(3) Kanning, K.C. et al. (2003) *J. Neurosci.* 23, 5425-5436.

(4) Jung, K.M. et al. (2003) *J. Biol. Chem.* 278, 42161-42169.



Western blot analysis of extracts from RN33B and SW480 cells using p75NTR (D8A8) Rabbit mAb.

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 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 BSA, 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.