

#3930 Store at -20°C

Rab3A 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 #5864
Swiss-Prot Acc. #P20336

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, M, R	25 kDa	Rabbit IgG**

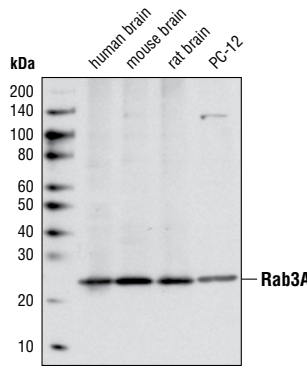
Background: The Rab family of proteins includes small, monomeric GTPases essential for regulating intracellular vesicle trafficking. Members of the Rab3 subfamily, including Rab3A-3D, are involved in the exocytosis of neurotransmitters and hormones (1). Rab3A is primarily expressed in neurons (2), neuroendocrine cells (such as rat PC-12 cells), and in human pancreatic β cells (3, 4). By acting as a molecular switch between active, GTP-bound Rab3A and the inactive, GDP-bound form, Rab3A inhibits synaptic vesicle and chromaffin granule secretion during late membrane release (5,6). Loss-of-function studies suggest Rab3A is involved in controlling synaptic vesicle targeting and docking at the active zone (7). Through binding to its direct effector Rabphilin, Rab3A also orchestrates the coupling between synaptic vesicle exocytosis and endocytosis (8).

Specificity/Sensitivity: Rab3A Antibody detects endogenous levels of total Rab3A protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu391 of human Rab3A. Antibodies are purified by peptide affinity chromatography.

Background References:

- Zerial, M. and McBride, H. (2001) *Nat Rev Mol Cell Biol* 2, 107–17.
- Geppert, M. et al. (1994) *Nature* 369, 493–7.
- Weber, E. et al. (1996) *J Biol Chem* 271, 6963–71.
- Yaekura, K. et al. (2003) *J Biol Chem* 278, 9715–21.
- Johannes, L. et al. (1994) *EMBO J* 13, 2029–37.
- Geppert, M. et al. (1997) *Nature* 387, 810–4.
- Leenders, A.G. et al. (2001) *Mol Biol Cell* 12, 3095–102.
- Coppola, T. et al. (2001) *J Cell Sci* 114, 1757–64.



Western blot analysis of extracts from human brain, mouse brain, rat brain and PC-12 cells using Rab3A Antibody.

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

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.