

#3322 Store at -20°C

# Ras-GRF1 Antibody



✓ 100 µl  
(10 western blots)

**Orders** ■ 877-616-CELL (2355)  
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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.

Applications W Transfected	Species Cross-Reactivity* M	Molecular Wt. 155 kDa	Source Rabbit**
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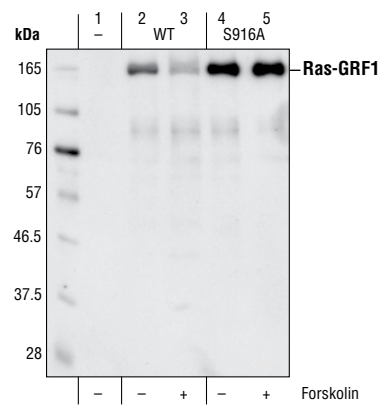
**Background:** Ras activity is regulated by GAP (GTPase activating proteins) and GEFs (guanine nucleotide exchange factors). Ras-GRF1 (also known as CDC25Mm) is neuronal RasGEF and is regulated by heterotrimeric G proteins and calcium influx (1,2). Binding to calmodulin and phosphorylation stimulate Ras-GRF1 activity (1,2). Multiple PKA phosphorylation sites on Ras-GRF have been identified. Phosphorylation on the two major sites, Ser54 and Ser822, inhibits Ras-GRF activity (3). Carbachol (a muscarinic agonist)-induced phosphorylation on Ser916 is essential but not sufficient for maximal Ras-GRF activity (4). It has been reported that Ras-GRF1 also shows GEF activity toward Rac after phosphorylation by the tyrosine kinase Src (5).

**Specificity/Sensitivity:** Ras-GRF1 Antibody detects transfected levels of Ras-GRF1. This antibody does not cross-react with Ras-GRF2.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal residues of mouse Ras-GRF1. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- (1) Mattingly, R.R. and Macara, I.G. (1996) *Nature* 382, 268–272.
- (2) Farnsworth, C.L. et al. (1995) *Nature* 376, 524–527.
- (3) Baouz, S. et al. (2001) *J. Biol. Chem.* 276, 1742–1749.
- (4) Mattingly, R.R. (1999) *J. Biol. Chem.* 274, 37379–37384.
- (5) Kiyono, M. et al. (2000) *J. Biol. Chem.* 275, 29788–29793.



Western blot analysis of extracts from COS cells, untransfected (lane 1) or transfected with either wild-type (lanes 2 and 3) or Ala916 mutant (lanes 4 and 5) Ras-GRF1, using Ras-GRF1 Antibody. Transfected COS cells were untreated or treated forskolin as indicated. (Triple HA-tagged Ras-GRF1 expressing plasmids provided by Dr. R. Mattingly, Dept. of Pharmacology, Wayne State University, Michigan.)

Entrez-Gene ID # 5923  
Swiss-Prot Acc. # Q13972

**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](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://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.