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#3321

Phospho-Ras-GRF1 (Ser916) Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	M	Transfected Only	155	Rabbit	#P27671	19417

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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.

Specificity/Sensitivity

Phospho-Ras-GRF1 (Ser916) Antibody detects transfected levels of Ras-GRF1 only when phosphorylated at serine 916. This antibody does not cross-react with phosphorylated Ras-GRF2.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding serine 916 of mouse Ras-GRF1. Antibodies are purified by protein A and peptide affinity chromatography.

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). Carcholol (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).

Background References

1. Mattingly, R.R. and Macara, I.G. (1996) *Nature* 382, 268-72.
2. Farnsworth, C.L. et al. (1995) *Nature* 376, 524-7.
3. Baouz, S. et al. (2001) *J. Biol. Chem.* 276, 1742-1749.
4. Mattingly, R.R. (1999) *J Biol Chem* 274, 37379-84.
5. Kiyono, M. et al. (2000) *J. Biol. Chem.* 275, 29788-29793.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

M: Mouse

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