

RGS4 (D4V1P) Rabbit mAb

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Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 25	Source/Isotype: Rabbit IgG	UniProt ID: #P49798	Entrez-Gene Id: 5999
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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.

Specificity/Sensitivity

RGS4 (D4V1P) Rabbit mAb recognizes endogenous levels of total RGS4 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human RGS4 protein.

Background

Regulators of G protein signaling (RGS) are a family of about 40 proteins that determine the signaling amplitude and duration of G protein-coupled receptor signaling via modulation of the GTPase activity of G proteins (1-3). Each RGS has a distinct structure, expression pattern, and regulation, resulting in preferential interactions with receptors, G proteins, and other signaling proteins, as well as a unique function (4).

Regulator of G-protein signaling 4 (RGS4) is a small RGS (23 kDa) that belongs to the R4 subfamily of heterotrimeric G-protein regulators. RGS4 contains a short amino-terminus that may be responsible for its functional specificity towards G-protein-coupled receptors, and a conserved RGS domain responsible for GAP activity (1). The RGS4 protein shares activity at both Gαq and Gαi/o proteins (5,6). Degradation of RGS4 is regulated by opioid receptor-mediated ubiquitination following stimulation by opioid receptor agonists, such as the DAMGO synthetic opioid peptide (7). RGS4 modulates the action of morphine and other opiates *in vivo* (8).

Background References

- Hollinger, S. and Hepler, J.R. (2002) *Pharmacol Rev* 54, 527-59.
- Traynor, J.R. and Neubig, R.R. (2005) *Mol Interv* 5, 30-41.
- Neubig, R.R. and Siderovski, D.P. (2002) *Nat Rev Drug Discov* 1, 187-97.
- Terzi, D. et al. (2009) *Prog Mol Biol Transl Sci* 86, 299-333.
- Xu, X. et al. (1999) *J Biol Chem* 274, 3549-56.
- Berman, D.M. et al. (1996) *Cell* 86, 445-52.
- Wang, Q. and Traynor, J.R. (2011) *J Biol Chem* 286, 7854-64.
- Han, M.H. et al. (2010) *Biol Psychiatry* 67, 761-9.

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 **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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