

#15129 Store at -20C

RGS4 (D4V1P) Rabbit mAb**Cell Signaling**
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H M R	Endogenous	25	Rabbit IgG	#P49798	5999

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

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- 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**WB:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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