

PDE4B (D7R1Y) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	90	Rabbit IgG	#Q07343	5142

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

PDE4B (D7R1Y) Rabbit mAb recognizes endogenous levels of total PDE4B protein. This antibody does not cross-react with PDE4A protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu61 of human PDE4B protein.

Background

Enzymes of the phosphodiesterase (PDE) superfamily catalyze the hydrolysis of 3',5'-cyclic nucleotides into the corresponding nucleotide 5'-monophosphates. The PDE superfamily includes 11 subfamilies (PDE1-PDE11) in mammals (1). These enzymes function as important positive and negative regulators of cellular response, including regulation of insulin secretion, heart function, erectile function, and inflammation (2-5). The cAMP-specific phosphodiesterase 4B (PDE4B, DPDE4) is important for the inflammatory response to lipopolysaccharide in monocytes (6). PDE4B plays an important role in the hydrolysis and inactivation of the ubiquitous second messenger cAMP that regulates lymphocyte cell growth and apoptosis (7). Research studies indicate that PDE4B is also involved in psychiatric disorders, including schizophrenia, autism, and depression (8-10).

Background References

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2. Dyachok, O. et al. (2006) *Nature* 439, 349-52.
3. Fischmeister, R. et al. (2006) *Circ Res* 99, 816-28.
4. Rosen, R.C. and Kostis, J.B. (2003) *Am J Cardiol* 92, 9M-18M.
5. Smith, S.J. et al. (2004) *Mol Pharmacol* 66, 1679-89.
6. Jin, S.L. and Conti, M. (2002) *Proc Natl Acad Sci U S A* 99, 7628-33.
7. Conti, M. et al. (2003) *J Biol Chem* 278, 5493-6.
8. Fatemi, S.H. et al. (2008) *Schizophr Res* 101, 36-49.
9. Braun, N.N. et al. (2007) *Neuroreport* 18, 1841-4.
10. Numata, S. et al. (2009) *Am J Med Genet B Neuropsychiatr Genet* 150B, 527-34.

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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