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#72096

PDE4B (D7R1Y) Rabbit mAb

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New 04/15

For Research Use Only. Not For Use In Diagnostic Procedures.**Applications**
W, IP
Endogenous**Species Cross-Reactivity***
H, M, R**Molecular Wt.**
90 kDa**Isotype**
Rabbit IgG**

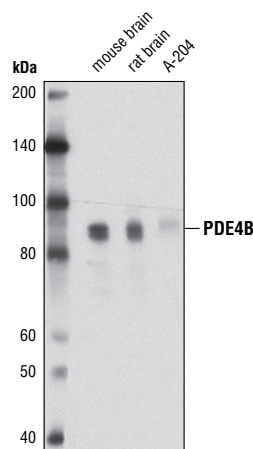
Background: Enzymes of the phosphodiesterase (PDE) superfamily catalyze the hydrolysis of 3',5'-cyclic nucleotides into the corresponding nucleotide 5'-monophosphates. The PDE superfamily includes 11 subfamilies (PDE1-PDE11) in mammals (1). These enzymes function as important positive and negative regulators 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).

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

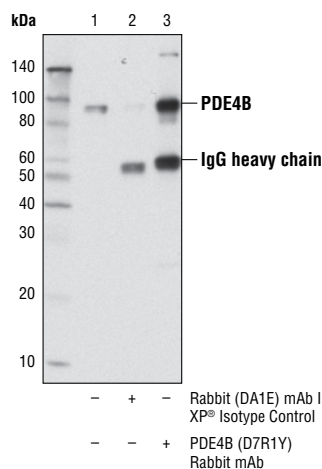
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu61 of human PDE4B protein.

Background References:

- (1) Bender, A.T. and Beavo, J.A. (2006) *Pharmacol Rev* 58, 488-520.
- (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 USA* 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.



Western blot analysis of extracts from mouse brain, rat brain, and A-204 cells using PDE4B (D7R1Y) Rabbit mAb.



Immunoprecipitation of PDE4B from mouse brain extracts. Lane 1 is 10% input, lane 2 is Rabbit (DA1E) mAb IgG XP[®] Isotype Control #3900, and lane 3 is PDE4B (D7R1Y) Rabbit mAb. Western blot analysis was performed using PDE4B (D7R1Y) Rabbit mAb.

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.

*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
Immunoprecipitation	1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

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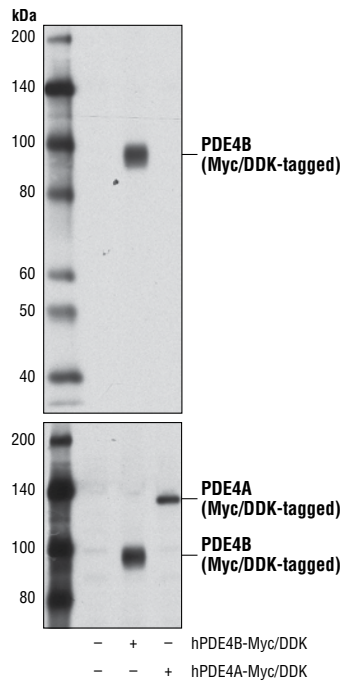
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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween[®]20 at 4°C with gentle shaking, overnight.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: 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.



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with constructs expressing Myc/DDK-tagged full-length human PDE4B protein (hPDE4B-Myc/DDK; +) or Myc/DDK-tagged full-length human PDE4A protein (hPDE4A-Myc/DDK; +), using PDE4B (D7R1Y) Rabbit mAb (upper) and Myc-Tag (71D10) Rabbit mAb #2278 (lower).