

Rabbit Polyclonal Anti-PDE4D7 antibody

Catalog Number: PD4D7-471AP

Lot Number:

General Information

Product	PDE4D7 Antibody
Description	cAMP-specific phosphodiesterase PDE4D7 (Pde4d) mRNA, complete cds; alternatively spliced Antibody Affinity Purified
Accession #	Uniprot: Q01063 GenBank: AF536978.1
Verified Applications	ELISA, IP, WB
Species Cross Reactivity	Chicken, Mouse, Rat
Host	Rabbit
Immunogen	Synthetic peptide corresponding to unique amino acid sequence on PDE4D7 variant gene.
Specificity	This antibody does not cross react with other PDE4D variants including PDE4D1, PDE4D2, PDE4D3, PDE4D4, and PDE4D5. It also does not cross react with other PDE family members including PDE4A, PDE4B or PDE4C.
Alternative Nomenclature	DPDE3 antibody, HSPDE4D antibody, PDE43 antibody, PDE4D7 antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	0.2 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20°C for long term storage.

Recommended Dilutions

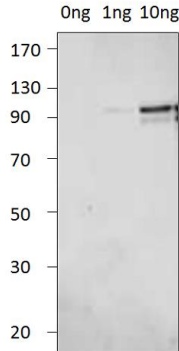
DOT Blot	1:10,000
ELISA	1:10,000
Immunoprecipitation	1:150
Western Blot	1:500

Related Products

Catalog

BIOTIN-Conjugated	PD4D7-BIOTIN
FITC-Conjugated	PD4D7-FITC
Antigenic Blocking Peptide	P-PD4D7
Western Blot Positive Control	PC-PD4D7

Application Verification:



WB of PD4D7-471AP with PC-PD4D7. 1:500 antibody dilution in DiluObuffer. Apparent MW is 110 kDa.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

Enzymes of the cAMP-dependent phosphodiesterase type 4 (PDE4) family are important in hydrolyzing cAMP produced by G-protein coupled receptor (GPCR) stimulated adenylyl cyclases. In brain more than 90% of cAMP formed by the stimulation of GPCRs is hydrolyzed by PDE4 enzymes (1). Members of the PDE4A, B and D family are associated with GPCRs (adrenergic and dopaminergic) signaling (2, 3). PDE4 enzymes are also important molecular targets for variety of therapeutic agents like antidepressants, anti-asthmatics, and anti-inflammatory drugs. PDE4 family comprised of 4 genes (PDE4A, B, C and D); each exhibiting multiple isozymes due to alternate splicing that leads to a larger number of distinct PDE4 variants (4). Members of the PDE4 family are regulated/activated by phosphorylation/dephosphorylation by cAMP-dependent protein kinase A and phosphatases (5). Two conserved phosphorylation motifs have been identified in PDE4B and PDE4D. Phosphorylation at PKA site resulted in significant increase in enzymatic activity of PDE4D variants. Phosphorylation state, protein-protein interactions and cellular trafficking of PDE4D enzymes play an important role in cAMP compartmentalization and cAMP-dependent signaling (6). Cyclic AMP-dependent phosphodiesterase type D (PDE4D) family is comprise of 9 variants (PDE4D1-PDE4D9). PDE4D1-PDE4D5 variants are produced by alternate splicing at the N-terminus. These splice variants have a common core protein.

The PDE4D7 selective antibody (PD4D7-471AP) was generated using a unique peptide to PDE4D7 member of the larger PDE4D family. PD4D7-471AP detects only the PDE4D7 variant of the PDE4D family and has no cross reactivity towards other members of the PDE4D family or other PDE4 proteins. The PDE4D7-selective antibodies are affinity purified on an immobilized antigen based affinity matrix. The isolated antibodies were then stabilized in antibody stabilization buffer for long-term storage. Antigenic blocking peptides (P-PD4D7) and western blot positive controls (PC-PD4D7) are available. Antibodies can be conjugated to secondary enzymes or fluorophores upon request at nominal costs. FabGennix provides PDE family selective, family subtype-selective and family-subtype-variant selective antibodies for detailed analyses of cAMP signaling pathways, please refer to our website at <http://fabgennix.com> for a complete listing.

References:

1. Ye Y., and O'Donnell M. J. J. Neurochem. 66; 1894-1902, 1997.
2. Farooqui S. M., Zhang K., Makhay M., Jackson K., Farooqui S. Q., et. al., (1998) J. Neurochem 57;1363-1391
3. Ye Y., Houslay M. D., Farooqui M. S., Jackson K. T., Chen M., O'Donnell J. M. J. Neurochem. 69; 2397-2404, 1998.
4. Beavo J. A. (1995) Physiological Rev. 75; 725-748, 1995.
5. Hoffman R., et. Al., Biochem. J. 333; 139-149, 1998.
6. Yarwood S. J. et. al., J. Biol. Chem. 274; 14909-14917, 1999.

For users who may require large amounts of the products listed above, please inquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.