

## Rabbit Polyclonal Anti-Phospho PDE4D PKA site (S190) antibody

Catalog Number: PPD4-440AP

Lot Number:

### General Information

<b>Product</b>	Phospho-PDE4D PKA site (S190) Antibody
<b>Description</b>	Phosphorylated Phosphodiesterase 4D PKA site (S190) Antibody
<b>Accession #</b>	NCBI: NP_001184148.1
<b>Verified Applications</b>	ELISA, IHC-P, IP, WB
<b>Species Cross Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Immunogen</b>	Synthetic peptide selective for PDE4D PKA site taken within amino acid region 50-100 on human PDE4D8 protein. Phosphorylated Serine 190 residue. Derived around the PKA phosphorylation site of serine 190:
<b>Specificity</b>	R-E-S <sup>P</sup> -F-L Detects endogenous levels of PDE4D only when phosphorylated at Serine 190.
<b>Alternative Nomenclature</b>	cAMP specific 3',5' cyclic phosphodiesterase 4D antibody, DKFZp686M11213 antibody, cAMP specific phosphodiesterase 4D antibody, DPDE3 antibody, Duncle like phosphodiesterase E3 antibody, FLJ97311 antibody, HSPDE4D antibody, PDE43 antibody, Phosphodiesterase 4D cAMP specific antibody, STRK1 antibody

### Physical Properties

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Immunoglobulin &amp; Concentration</b>	0.57 mg/ml IgG in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

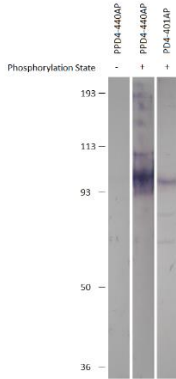
<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Immunohistochemistry</b>	1:50-1:100
<b>Immunoprecipitation</b>	1:150
<b>Western Blot</b>	1:500

## Related Products

## Catalog #

<b>FITC-Conjugated</b>	PPD4.440-FITC
<b>BIOTIN-Conjugated</b>	PPD4.440-BIOTIN
<b>Antigenic Blocking Peptide</b>	P-PPD4.440
<b>Western Blot Positive Control</b>	PC-PPD4.440

## Application Verification:



WB of PPD4-440AP & PD4-401AP with phosphorylated and non-phosphorylated PDE4D3 protein. PDE4D3 protein is phosphorylated by catalytic subunit of PKA.

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).

Phospho-PDE4D selective antibody was generated from a peptide that represents a putative PKA phosphorylation site and is common in all PDE4D enzymes (5). Antibody PPD4-440AP labels all long-form PDE4D variants phosphorylated at PKA site. To detect the non-phosphorylated PDE4D protein a PDE4D-selective antibody (PD4-401AP) is also available in affinity purified form. Antigenic blocking peptide and western blot positive controls for phosphorylated and non-phosphorylated PDE4D are available for easy identification and quantification of these proteins. Antibodies can be conjugated to fluorescent probes or secondary enzymes upon request at an additional charge. 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'Donell 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 1991
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.

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