PDE4D Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	PDE4D, Blocking Peptide
Full Product Name	PDE4D Blocking Peptide
Product Gene Name	PDE4D blocking peptide
Product Synonym Names	cAMP specific 3', 5' cyclic phosphodiesterase 4D; DKFZp686M11213; 5"-cyclic phosphodiesterase 4D; cAMP specific phosphodiesterase 4D; cAMP specific phosphodiesterase PDE4D6; cAMP-specific 3"; DPDE3; Dunce like phosphodiesterase E3; FLJ97311; HSPDE4D; PDE43; Pde4d; PDE4D_HUMAN; PDE4DN2; Phosphodiesterase 4D cAMP specific (dunce (Drosophila) homolog phosphodiesterase E3); Phosphodiesterase 4D cAMP specific (phosphodiesterase E3 dunce homolog Drosophila); Phosphodiesterase 4D cAMP specific; Phosphodiesterase 4D, cAMP specific (dunce); STRK1
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	PDE4D peptide (MBS9625907) is used for blocking the activity of PDE4D antibody (MBS9607191)
Molecular Weight	24,429 Da
OMIM	600129
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for PDE4D blocking peptide	Blocking/Control
Related Product Information for PDE4D blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of PDE4D blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PDE4D purchase	MBS9625907 is a blocking peptide targeting PDE4D.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PDE4D. It may not necessarily be applicable to this product.

NCBI GI #	157277988
NCBI GeneID	5144
NCBI Accession #	NP_001098101.1

UniProt Primary Accession #	Q08499
UniProt Secondary Accession #	O43433; Q13549; Q13550; Q13551; Q7Z2L8; Q8IV84; Q8IVA9; Q8IVD2; Q8IVD3; Q96HL4; Q9HCX7
UniProt Related Accession #	Q08499
GenBank Nucleotide #	NM_001104631.1
NCBI Official Full Name	cAMP-specific 3',5'-cyclic phosphodiesterase 4D isoform PDE4D4
NCBI Official Synonym Full Names	phosphodiesterase 4D
NCBI Official Symbol	PDE4D
NCBI Official Synonym Symbols	DPDE3; PDE43; STRK1; ACRDYS2; HSPDE4D; PDE4DN2
UniProt Protein Name	cAMP-specific 3',5'-cyclic phosphodiesterase 4D
UniProt Synonym Protein Names	DPDE3; PDE43
Protein Family	cAMP-specific 3',5'-cyclic phosphodiesterase
UniProt Gene Name	PDE4D
UniProt Synonym Gene Names	DPDE3
UniProt Entry Name	PDE4D_HUMAN
NCBI Protein Information	cAMP-specific 3',5'-cyclic phosphodiesterase 4D
NCBI Summary for PDE4D	This gene encodes one of four mammalian counterparts to the fruit fly 'dunce' gene. The encoded protein has 3',5'-cyclic-AMP phosphodiesterase activity and degrades cAMP, which acts as a signal transduction molecule in multiple cell types. This gene uses different promoters to generate multiple alternatively spliced transcript variants that encode functional proteins.[provided by RefSeq, Sep 2009]
UniProt Comments for PDE4D	PDE4D: Hydrolyzes the second messenger cAMP, which is a key regulator of many important physiological processes. Homodimer for the long isoforms. Isoforms with truncated N-termini are monomeric. Isoform 3 is part of a ternary complex containing PRKAR2A, PRKAR2B and AKAP9. Interacts with PDE4DIP. Identified in a complex composed of RYR1, PDE4D, PKA, FKBP1A and protein phosphatase 1 (PP1). Isoform 5, isoform N3 and isoform 12 bind GNB2L1 via their unique N-terminus. Binds ARRB2. Widespread; most abundant in skeletal muscle. Isoform 6 is detected in brain. Isoform 8 is detected in brain, placenta, lung and kidney. Isoform 7 is detected in heart and skeletal muscle. Inhibited by rolipram. Activated by phosphatidic acid. Belongs to the cyclic nucleotide phosphodiesterase family. PDE4 subfamily. 12 isoforms of the human protein are produced by alternative splicing. Protein type: Nucleotide Metabolism - purine; Phosphodiesterase; EC 3.1.4.53 Chromosomal Location of Human Ortholog: 5q12 Cellular Component: Golgi apparatus; centrosome; membrane; myofibril; apical plasma membrane; voltage-gated calcium channel complex; cytosol Molecular Function: 3',5'-cyclic-AMP phosphodiesterase activity; protein binding; enzyme binding; metal ion binding; ubiquitin protein ligase binding; beta-2 adrenergic receptor binding; drug binding; cAMP binding; 3',5'-cyclic-nucleotide phosphodiesterase activity; SH3 domain binding; ATPase binding Biological Process: neutrophil chemotaxis; negative regulation of heart contraction; regulation of heart rate; multicellular organism growth; positive regulation of smooth muscle cell proliferation; cAMP catabolic process; negative regulation of peptidyl-serine phosphorylation; positive regulation of smooth muscle cell migration; T cell receptor signaling pathway; memory; positive regulation of interferon-gamma production; cAMP-mediated signaling; smooth muscle contraction; cellular protein complex assembly; positive regulation of interleukin-2 production; regulation of receptor activity; regulation of G-protein coupled receptor protein signaling pathway; positive regulation of interleukin-5 production; lung development; aging
Research Articles on PDE4D	**1.** No association was found between single-nucleotide polymorphisms of ALOX5AP or PDE4D and the risk of overall ischemic stroke in a southeastern Chinese population.

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