

Recombinant Human PDE9A, His/GST-tagged

Cat. No. PDE9A-551H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PDE9A(Met 1-Ala 533) fused with His/GST tag at N-terminal was expressed in Baculovirus-Insect Cells.
Species	Human
Source	Insect Cells
ProteinLength	1-533 a.a.
Description	High affinity cGMP-specific 3',5'-cyclic phosphodiesterase 9A, also known as PDE9A, is a member of the cyclic nucleotide phosphodiesterase family and PDE9 subfamily. PDE9A is expressed in all tissues examined (testis, brain, small intestine, skeletal muscle, heart, lung, thymus, spleen, placenta, kidney, liver, pancreas, ovary and prostate) except blood. Highest levels of PDE9A is in brain, heart, kidney, spleen, prostate and colon. Isoform PDE9A12 is found in prostate. PDE9A mRNA is widely distributed throughout the rat and mouse brain, with the highest expression observed in cerebellar Purkinje cells. PDE9A is the only cGMP-specific PDE with significant expression in the forebrain, and as such is likely to play an important role in NO-cGMP signaling. PDE9A is highly conserved between species and is widely distributed throughout the rodent brain. PDE9A is probably involved in maintenance of low cGMP levels in cells and might play an important role in a variety of brain functions involving cGMP-mediated signal transduction. PDE9A hydrolyzes the second messenger cGMP, which is a key regulator of many important physiological processes. PDE9A represents a novel drug target worthy of further study.

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Predicted N Terminal	Met
Form	Lyophilized from sterile 20mM Tris, 500mM NaCl, 5mM GSH, pH 7.4, 10% gly1. Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA.2. Please contact us for any concerns or special requirements.
Molecular Mass	The recombinant human PDE9A consisting of 770 amino acids and has a calculated molecular mass of 89.5 kDa. It migrates as an approximately 75 kDa band in SDS-PAGE under reducing conditions.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method
Purity	> 90 % as determined by SDS-PAGE
Storage	Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name	PDE9A phosphodiesterase 9A [Homo sapiens]
Official Symbol	PDE9A
Synonyms	HSPDE9A2; high affinity cGMP-specific 3',5'-cyclic phosphodiesterase 9A; CGMP-specific 3',5'-cyclic phosphodiesterase type 9; phosphodiesterase PDE9A21
Gene ID	5152
mRNA Refseq	NM_001001567

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Protein Refseq	NP_001001567
MIM	602973
UniProt ID	O76083
Chromosome Location	21q22.3
Pathway	Hemostasis, organism-specific biosystem; Nitric oxide stimulates guanylate cyclase, organism-specific biosystem; Platelet homeostasis, organism-specific biosystem
Function	3',5'-cyclic-GMP phosphodiesterase activity; 3',5'-cyclic-nucleotide phosphodiesterase activity; metal ion binding

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