Recombinant Human PDE9A, His-tagged

Cat. No. PDE9A-550H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human PDE9A(Pro 181-Lys 50) fussed with His tag at N-terminal was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	181-50 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.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Predicted N Terminal	Met
Form	Lyophilized from sterile PBS, pH 7.41. 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 337 amino acids and has a calculated molecular mass of 40 kDa. It migrates as an approximately 37 kDa band in SDS-PAGE under reducing conditions.
Purity	> 95 % as determined by SDS-PAGE
Stability	Samples are stable for up to twelve months from date of receipt at -70°C
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
Protein Refseq	NP_001001567

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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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