Active Recombinant Human Phosphodiesterase 9A, GST-tagged

Cat. No. PDE9A-448H **Lot. No.** (See product label)

SPECIFICATION

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

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

	processes. PDE9A represents a novel drug target worthy of further study.
Form	40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 16 mM glutathione, 3 mM DTT and 20% glycerol
Bio-activity	≥1064 pmol/min/μg.
Molecular Mass	MW=87.7 kDa
Purity	≥60%
Unit Definition	One unit is defined as the amount of enzyme that will convert 1 pmole of 3', 5'-cGMP to 5'-GMP per minute at 37°C.
Applications	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.
Stability	>6 months at -80°C. Avoid freeze/thaw cycles.
Full Length	Full L.

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

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mRNA Refseq	NM_001001567
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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