

# Recombinant Human PDE9A Protein (His & GST Tag)



Catalog Number: PKSH031015

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

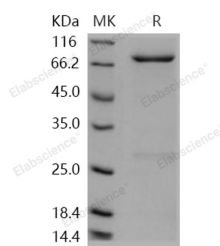
## Description

<b>Synonyms</b>	HSPDE9A2
<b>Species</b>	Human
<b>Expression Host</b>	Baculovirus-Insect Cells
<b>Sequence</b>	Met 1-Ala 533
<b>Accession</b>	O76083-2
<b>Calculated Molecular Weight</b>	89.5 kDa
<b>Observed molecular weight</b>	75 kDa
<b>Tag</b>	N-His-GST

## Properties

<b>Purity</b>	> 90 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 20mM Tris, 500mM NaCl, 5mM GSH, pH 7.4, 10% glycerol Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed m
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 90 % as determined by reducing SDS-PAGE.

## Background

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

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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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