

## PDE9A Protein, Human, Recombinant (His &amp; Myc)

## General Information

Synonyms:	PDE9A; High affinity cGMP-specific 3',5'-cyclic phosphodiesterase 9A; 5'-cyclic phosphodiesterase 9A
Protein Construction:	1-593 aa
Species:	Human
Expression Host:	E. coli
Accession:	O76083
Molecular Weight:	76.0 kDa (predicted)
AA Sequence:	MGSGSSSRPKAIYLDIDGRIQKVIFSKYCNSSDIMDLFCIATGLPRNTTISLLTTDDAMVSDPTMPANSERTPY KVRPVAIKQLSAGVEDKRTTSRQSAERPLRDRRVVGLQPRREGAFESGQVEPRPREPQGCYQEGQRIPPER EELIQSVLAQVAEQFSRAFKINELKAEVANHLAVLEKRVELEGLKVVEIEKCKSDIKKMREELAARSSRTNCPCK YSFLDNHKKLTPRRDVPTYPKYLLSPETIEALRKPTFDVWLWEPNEMLSCLEHMYHDLGLVRDFSINPVTLRR WLFCVHDNYRNNPFHNRHCFCAQMMYSMVWLC SLQEKFSQTDILIMTAAICHDLDPGYNNTYQINAR TELAVRYNDISPLENHHC AVAFQILAEPECNIFSNIPPDGFKQIRQGMITLILATDMARHAEIMDSFKEKMENF DYSNEEHMTLLKMILIKCCDISNEVRPMEVAEPWVDCLEEFMQSDREKSEGLPVAPFMDRDKVTKATAQIG FIKVLIPMFETVTKLFPMVVEIMLQPLWESDRYEELKRIDDAMKELQKKTDSLTSGATEKSRERSRDVKNSEG DCA

## QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

## Preparation and Storage

## Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

## Stability &amp; Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months.

Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Specifically hydrolyzes the second messenger cGMP, which is a key regulator of many important physiological processes. Highly specific: compared to other members of the cyclic nucleotide phosphodiesterase family, has the highest affinity and selectivity for cGMP. Specifically regulates natriuretic-peptide-dependent cGMP signaling in heart, acting as a regulator of cardiac hypertrophy in myocytes and muscle. Does not regulate nitric oxide-dependent cGMP in heart. Additional experiments are required to confirm whether its ability to hydrolyze natriuretic-peptide-dependent cGMP is specific to heart or is a general feature of the protein (Probable). In brain, involved in cognitive function, such as learning and long-term memory.

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