

# Human PDE4B / DPDE4 Protein (His & GST Tag)

Catalog Number: 11527-H20B



**Sino Biological Inc.**  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

DPDE4; PDEIVB; Dpde4; dunce; R74983

### Protein Construction:

A DNA sequence encoding the human PDE4B isoform 2 (NP\_001032416.1) (Met 1-Thr 564) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus.

**Source:** Human

**Expression Host:** Baculovirus-Insect Cells

## QC Testing

**Purity:** > 80 % as determined by SDS-PAGE

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant human PDE4B/GST chimera consists of 801 amino acids and has a calculated molecular mass of 92.2 kDa. It migrates as an approximately 100 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 50mM Tris, 100mM NaCl, 0.5mM GSH, 10% gly, 0.5mM PMSF, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

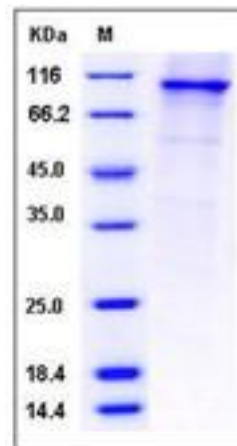
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

cAMP-specific 3',5'-cyclic phosphodiesterase 4B, also known as PDE4B and DPDE4, is a member of the cyclic nucleotide phosphodiesterase family, PDE4 subfamily. Cyclic nucleotide phosphodiesterases (PDEs) comprise a large family of enzymes that catalyze the hydrolysis of cAMP or cGMP and are implicated in various diseases. The crystal structures reveal a common scheme of inhibitor binding to the PDEs: (i) a hydrophobic clamp formed by highly conserved hydrophobic residues that sandwich the inhibitor in the active site; (ii) hydrogen bonding to an invariant glutamine that controls the orientation of inhibitor binding. A scaffold can be readily identified for any given inhibitor based on the formation of these two types of conserved interactions. These structural insights will enable the design of isoform-selective inhibitors with improved binding affinity and should facilitate the discovery of more potent and selective PDE inhibitors for the treatment of a variety of diseases. PDE4B / DPDE4 hydrolyzes the second messenger cAMP, which is a key regulator of many important physiological processes. It is expressed in brain, heart, lung and skeletal muscle. PDE4B / DPDE4 may be involved in mediating central nervous system effects of therapeutic agents ranging from antidepressants to antiasthmatic and anti-inflammatory agents

## References

1. Bolger G. et al., 1993, Mol. Cell. Biol. 13:6558-71.
2. Card G.L. et al., 2004, Structure 12:2233-47.
3. Card G.L. et al., 2005, Nat. Biotechnol. 23:201-7.

Manufactured By Sino Biological Inc., FOR RESEARCH USE ONLY. NOT FOR USE IN HUMANS.

Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>