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

Catalog Number:PKSH031100

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

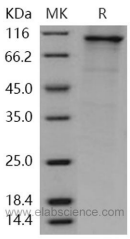
Description

Synonyms	DPDE4;PDEIVB
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Thr 564
Accession	NP_001032416.1
Calculated Molecular Weight	92.2 kDa
Observed molecular weight	100 kDa
Tag	N-His & GST

Properties

Purity	> 80 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg as determined by the LAL method.
Storage	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℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 100mM NaCl, 0.5mM GSH, 10% gly, 0.5mM PMSF, pH 8.0
Reconstitution	Please refer to the printed manual for detailed information.

Data



Background

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

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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

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