

PDE1B Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	PDES1B;phosphodiesterase 1B, calmodulin-dependent;PDE1B1
Protein Construction:	A DNA sequence encoding the human PDE1B long isoform (Q01064-1) (Met 1-Asp 536) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q01064-1
Molecular Weight:	89.2 kDa (predicted); 75 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 94 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, 100 mM NaCl, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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

Calcium/calmodulin-dependent 3',5'-cyclic nucleotide phosphodiesterase 1B, also known as Cam-PDE 1B and PDE1B, is a cytoplasm protein that belongs to the cyclic nucleotide phosphodiesterase family and PDE1 subfamily. Phosphodiesterase-1A (PDE1A), Phosphodiesterase-1B (PDE1B), Phosphodiesterase-4B (PDE4B), and Phosphodiesterase-4A (PDE4A) are important regulators of signal transduction in striatum due to their catalysis of

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cyclic AMP and cyclic GMP. PDE1B is highly expressed in the striatum. It binds two divalent metal cations per subunit. Site one of PDE1B may preferentially bind zinc ions, while site two of PDE1B has a preference for magnesium and/or manganese ions. PDE1B is a cyclic nucleotide phosphodiesterase with a dual-specificity for the second messengers cAMP and cGMP, which are key regulators of many important physiological processes. It has a preference for cGMP as a substrate.

Reference

- Reed, T.M. et al., 1998, Mamm Genome. 9 (7):571-6.
Zhang K.Y.J. et al., 2004, Mol. Cell 15:279-86.
Siuciak, J.A. et al., 2007, Neuropharmacology. 53 (1):113-24.
Dlaboga, D. et al., 2008, Neuropharmacology. 54 (4):745-54.

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