

PRODUCT INFORMATION



PDE1B1 (human, recombinant)

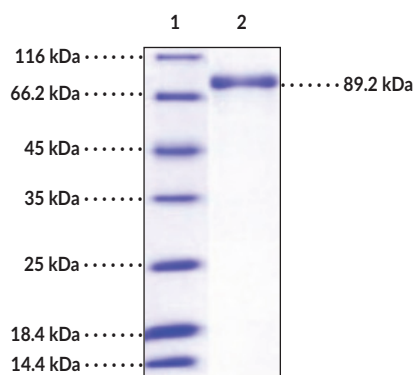
Item No. 32040

Overview and Properties

Synonyms: Calcium/Calmodulin-dependent 3',5'-Cyclic Nucleotide Phosphodiesterase 1B, Cam-PDE 1B, Phosphodiesterase 1B1
Source: Recombinant human N-terminal His-GST-tagged PDE1B1 expressed in insect cells
Amino Acids: 1-536 (full length)
Uniprot No.: Q01064-1
Molecular Weight: 89.2 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥94% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile 50 mM Tris, pH 8.0, with 100 mM sodium chloride
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: PDE1B1

SDS-PAGE Analysis of PDE1B1.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Phosphodiesterase 1B (PDE1B) is a calcium/calmodulin-stimulated cyclic nucleotide phosphodiesterase that hydrolyzes both cAMP and cGMP.¹ Alternative splicing of *PDE1B* pre-mRNA results in the formation of various PDE1B isoforms, including PDE1B1.² PDE1B1 is comprised of an N-terminal calmodulin binding domain, a catalytic domain, and a C-terminal domain.¹ *PDE1B1* is expressed in the brain, with the highest levels observed in the caudate nucleus and putamen.² *PDE1B* knockout mice have decreased striatal serotonin levels and exhibit increased spontaneous locomotor activity in a novel environment, as well as increased methamphetamine-induced locomotor activity compared with wild-type mice.³ Striatal expression of *PDE1B* is decreased in the R6/2 transgenic mouse model of Huntington's disease.⁴ Cayman's PDE1B1 (human, recombinant) protein consists of 773 amino acids and has a calculated molecular weight of 89.2 kDa.

References

1. Yu, J., Wolda, S.L., Frazier, A.L.B., *et al.* Identification and characterisation of a human calmodulin-stimulated phosphodiesterase PDE1B1. *Cell Signal*. **9(7)**, 519-529 (1997).
2. Fidock, M., Miller, M., and Lanfear, J. Isolation and differential tissue distribution of two human cDNAs encoding PDE1 splice variants. *Cell Signal*. **14(1)**, 53-60 (2002).
3. Siuciak, J.A., McCarthy, S.A., Chapin, D.S., *et al.* Behavioral and neurochemical characterization of mice deficient in the phosphodiesterase-1B (PDE1B) enzyme. *Neuropharmacology* **53(1)**, 113-124 (2007).
4. Hebb, A.L.O., Robertson, H.A., and Denovan-Wright, E.M. Striatal phosphodiesterase mRNA and protein levels are reduced in Huntington's disease transgenic mice prior to the onset of motor symptoms. *Neuroscience* **123(4)**, 967-981 (2004).