

PRODUCT INFORMATION



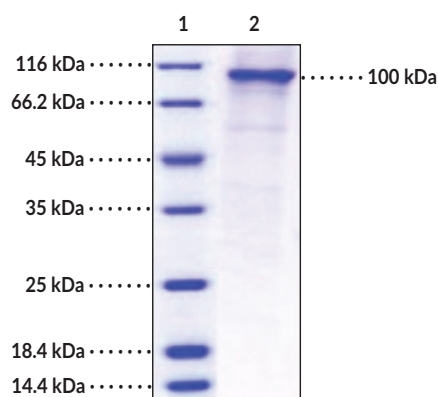
PDE4B2 (human, recombinant)

Item No. 32038

Overview and Properties

Synonyms: cAMP-Specific 3',5'-cyclic Phosphodiesterase 4B2, Dunce-like Phosphodiesterase E4, PDE32, Phosphodiesterase 4B Short
Source: Recombinant human N-terminal His-GST-tagged PDE4B2 expressed in insect cells
Amino Acids: 1-564
Molecular Weight: 92.2 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥80% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile 50 mM Tris, pH 8.0, with 100 mM sodium chloride, 0.5 mM GSH, 10% gly, and 0.5 mM PMSF
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: PDE4B2

SDS-PAGE Analysis of PDE4B2. This protein has a calculated molecular weight of 92.2 kDa. It has an apparent molecular weight of approximately 100 kDa by SDS-PAGE under reducing conditions.

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
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

PDE4B is a nucleotide phosphodiesterase that hydrolyzes cAMP to regulate cell signaling.¹ It is expressed in brain, lung, heart, gastrointestinal tract, liver, and reproductive tissues and produces four isomers via alternative splicing that have distinct domain organizations. PDE4B2, also known as PDE4B short, is composed of a C-terminal catalytic domain, two linker regions, an N-terminal conserved region known as upstream conserved region 2 (UCR2), and an N-terminal targeting domain. Brainstem and spinal cord levels of *Pde4b2* mRNA are increased in a mouse model of experimental autoimmune encephalomyelitis (EAE).² *PDE4B2* mRNA levels are also increased in myometrium isolated from near-term pregnant women compared with myometrium isolated from non-pregnant women.³ Protein levels of Pde4b2 are increased in the ipsilateral parietal cortex from 30 min to 24 hours post-injury in a rat model of fluid percussion-induced traumatic brain injury.⁴ Cayman's PDE4B2 (human, recombinant) protein consists of 801 amino acids and has a calculated molecular mass of 92.2 kDa. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 100 kDa.

References

1. Fertig, B.A. and Baillie, G.S. PDE4-mediated cAMP signalling. *J. Cardiovasc. Dev. Dis.* **5(1)**, 8 (2018).
2. Sanabra, C., Johansson, E.M., and Mengod, G. Critical role for PDE4 subfamilies in the development of experimental autoimmune encephalomyelitis. *J. Chem. Neuroanat.* **47**, 96-105 (2013).
3. Méhats, C., Schmitz, T., Oger, S., *et al.* PDE4 as a target in preterm labour. *BMC Pregnancy Childbirth* **7(Suppl. 1)**, S12 (2007).
4. Oliva, A.A., Jr., Kang, Y., Furones, C., *et al.* Phosphodiesterase isoform-specific expression induced by traumatic brain injury. *J. Neurochem.* **123(6)**, 1019-1029 (2012).

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