

# PRODUCT INFORMATION



## PDE1C1 (human, recombinant)

Item No. 32042

### Overview and Properties

**Synonyms:** 3',5'-cyclic-AMP Phosphodiesterase 1C1, 3',5'-cyclic-GMP Phosphodiesterase 1C1, Calcium/Calmodulin-dependent 3',5'-cyclic Nucleotide Phosphodiesterase 1C1, Cam-PDE1C1, Phosphodiesterase 1C1, HCam3a

**Source:** Recombinant human N-terminal His-GST-tagged PDE1C1 expressed in insect cells

**Amino Acids:** 1-634 (full length)

**Uniprot No.:** Q8TAE4

**Molecular Weight:** 100 kDa

**Storage:** -80°C (as supplied)

**Stability:** ≥1 year

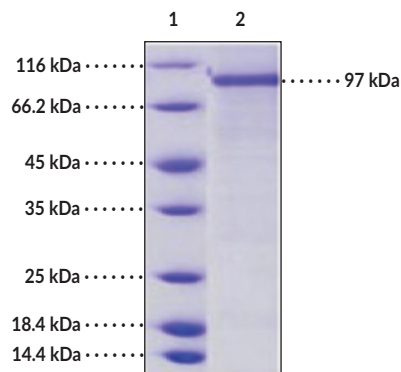
**Purity:** ≥85% estimated by SDS-PAGE

**Supplied in:** Lyophilized from sterile 20 mM Tris, 500 mM sodium chloride, pH 7.4, with 10% glycerol and 3 mM DTT

**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: PDE1C1

**SDS-PAGE Analysis of PDE1C1.** This protein has a calculated molecular weight of 100 kDa. It has an apparent molecular weight of approximately 97 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.

Copyright Cayman Chemical Company, 06/12/2020

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

---

Phosphodiesterase 1C (PDE1C) is a calcium/calmodulin-dependent PDE that hydrolyzes cAMP and cGMP.<sup>1,2</sup> Alternative splicing of *PDE1C* produces three isoforms that exhibit isoform-specific tissue distribution and domain structure.<sup>1</sup> PDE1C isoforms all contain a calcium/calmodulin binding region and a PDE catalytic domain but vary in carboxyterminal length.<sup>3</sup> PDE1C1 is a 72 kDa isoform that is primarily expressed in the heart and brain but is also expressed in the lungs, uterus, and testes. *PDE1C1* is expressed in MAA human malignant melanoma cells.<sup>4</sup> Hippocampal *PDE1C1* expression is increased in aged rats.<sup>5</sup> Cayman's PDE1C1 (human, recombinant) protein consists of 871 amino acids and has a calculated molecular weight of 100 kDa.

## References

---

1. Loughney, K., Martins, T.J., Harris, E.A.S., *et al.* Isolation and characterization of cDNAs corresponding to two human calcium, calmodulin-regulated, 3',5'-cyclic nucleotide phosphodiesterases. *J. Biol. Chem.* **271**(2), 796-806 (1996).
2. Yan, C., Zhao, A.Z., Bentley, J.K., *et al.* The calmodulin-dependent phosphodiesterase gene *PDE1C* encodes several functionally different splice variants in a tissue-specific manner. *J. Biol. Chem.* **271**(41), 25699-25706 (1996).
3. Loughney, K. and Ferguson, K. Identification and quantification of PDE isoenzymes and subtypes by molecular biological methods. *The Handbook of Immunopharmacology*. Schudt, C., Dent, G., and Rabe, K.F. Academic Press (1996).
4. Shimizu, K., Murata, T., Watanabe, Y., *et al.* Characterization of phosphodiesterase 1 in human malignant melanoma cell lines *Anticancer Res.* **29**(4), 1119-1122 (2009).
5. Kelly, M.P., Adamowicz, W., Bove, S., *et al.* Select 3',5'-cyclic nucleotide phosphodiesterases exhibit altered expression in the aged rodent brain. *Cell Signal.* **26**(2), 383-397 (2014).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM