

Recombinant Human PLCG1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50797

Size: 10ug, 100ug

Protein Name: 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase gamma-1 (EC 3.1.4.11) (PLC-148) (Phosphoinositide phospholipase C-gamma-1) (Phospholipase C-II) (PLC-II) (Phospholipase C-gamma-1) (PLC-gamma-1)

Synonym: PLCG1, PLC1

UniProt ID: P19174

UniProt Link: www.uniprot.org/uniprotkb/P19174/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1290 AA

Molecular Weight: 149 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAGAASPCANGCGPGAPSDAEVLHLCRSLEVGTVMTLFYSKKSQRPERKTFQVKLETRQITWSRG
ADKIEGAIDIREIKEIRPGKTSRDFDRYQEDPAFRPDQSHCFVILYGMEFRLKTLSLQATSEDEVNMWI
KGLTWLMEDTLQAPTPLQIERWLRKQFYSDVRNREDRISAKDLKNMLSQVNYRVNMRFLRERLTD
LEQRSGDITYGQFAQLYRSLMYSQAQKTMDLPFLEASTLRAGERPELCRVSLPEFQQFLLDYQGELW
AVDRLQVQEFMLSFLRDPLREIEEPYFFLDEFVTFLFSKENS VWNSQLDAVCPDTMNNPLSHYWISS
SHNTYLTGDQFSSESSLEAYARCLRMGCRCIELDCWDGPDGMPVIYHGHTLTTKIKFSDVLHTIKEH
AFVASEYPVILSIEDHCSIAQQRNMAQYFKKVLGDTLLTKPVEISADGLPSPNQLKRKILIKHKKLAEGS
AYEEVPTSM MYSENDISNSIKNGILYLEDPVNHEWYPHYFVLTSSKIYYSEETSSDQGNEDDEEPKEV
SSSTELHSNEKWFHGKLGAGRDGRHIAERLLTEYCIETGAPDGSFLVRESETFVGDYTLSEFWRNGK
VQHCRHSRQDAGTPKFFLTDNLVFDSDLYDLITHYQQVPLRCNEFEMRLSEVPVQTNAHESKEWYH
ASLTRAQAEHMLMRVPRDGAFLVRKRNEPNSYSAISFRAEGKIKHCRVQQEGQTVMLGNSEFDSLVD
LISYYEKHPLYRKMKLRYPINEEALEKIGTAEPDYGALYEGRNPGFYVEANPMPTFKCAVKALFDYKA
QREDELTFIKSAIQNVEKQEGGWWRGDYGGKKQLWFPSNYVEEMVNPVALEPEREHLDENSPLG
DLLRGVLDVPACQIAIRPEGKNNRLFVFSISMASVAHWSLDVAADSQEELQDWVKKIREVAQTADAR
LTEGKIMERRKKIALELSELVYCRPVFDEEEKIGTERACYRDMSSFPETKAKEYVNKAKGKKFLQYN
RLQLSRIYPKGQRDSSNYDPLPMWICGSQLVALNFQTPDKPMQMNQALFMTGRHCGYVLQPSTM
RDEAFDPFDKSSRLGLEPCAISIEVLGARHLPKNGRGIVCPFVEIEVAGAEYDSTKQKTEFVVDNGLN

PVWPAKPFHFQISNPEFAFLRFVVEEDMFSDQNFLAQATFPVKGLKTGYRAVPLKNNYSEDLELAS
LLIKIDIFPAKENGDLSPFSGTSLRERGSASGQLFHGRAREGSFESRYQQPFEDFRISQEHLADHFD
SRERRAPRRTRVNGDNRL

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant 1-phosphatidylinositol 4,5-bisphosphate phosphodiesterase gamma-1 (EC 3.1.4.11) (PLC-148) (Phosphoinositide phospholipase C-gamma-1) (Phospholipase C-II) (PLC-II) (Phospholipase C-gamma-1) (PLC-gamma-1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Mediates the production of the second messenger molecules diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3). Plays an important role in the regulation of intracellular signaling cascades. Becomes activated in response to ligand-mediated activation of receptor-type tyrosine kinases, such as PDGFRA, PDGFRB, EGFR, FGFR1, FGFR2, FGFR3 and FGFR4 (By similarity). Plays a role in actin reorganization and cell migration (PubMed:17229814). Guanine nucleotide exchange factor that binds the GTPase DNM1 and catalyzes the dissociation of GDP, allowing a GTP molecule to bind in its place, therefore enhancing DNM1-dependent endocytosis (By similarity).

Subcellular Localization: Cell projection, lamellipodium . Cell projection, ruffle . Note=Rapidly redistributed to ruffles and lamellipodia structures in response to epidermal growth factor (EGF) treatment.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.