

Recombinant Rat PLS1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52406

Size: 10ug, 100ug

Protein Name: Phospholipid scramblase 1 (PL scramblase 1) (Ca(2+)-dependent phospholipid scramblase 1) (Mg(2+)-dependent nuclease) (EC 3.1.-.-)

Synonym: Plscr1

UniProt ID: P58195

UniProt Link: www.uniprot.org/uniprotkb/P58195/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 335 AA

Molecular Weight: 37 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MEKHGPPEHAAYPIQADYQGSQGPYPGPQGYPYPGPQGPYAGPQGPYPGPQGYPYAGPQGPYPG
PQPGYPVPPGSYAGGDPSPGFVQHQPAYNHPGGPGGTPWMQAPPPPLDCPPGLEYLTLQIDQILVH
QQIELLEVLTFETNNKYEIKNSLGQRVYFAVEDTDCCTRNCCGASRPFTLRILDNMGREVMTLERP
LRCSSCCFPCCLQEIEIQAPPVGVVYVQVWHPCLPKFTLQNEKRQDVLKVVGPCVVCSCCSDIDF
ELKSLDEESVVGKISKQWSGFVREAFDADNFGIQFPLDLVKMKAVMLGACFLIDFMFFERTGNEE
QRSGVW

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 Phospholipid scramblase 1 (PL scramblase 1) (Ca(2+)-dependent phospholipid scramblase 1) (Mg(2+)-dependent nuclease) (EC 3.1.-.-) 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: Catalyzes calcium-induced ATP-independent rapid bidirectional and non-specific distribution of phospholipids (lipid scrambling or lipid flip-flop) between the inner and outer leaflet of the plasma membrane resulting in collapse of the phospholipid asymmetry which leads to phosphatidylserine externalization on the cell surface (By similarity). Mediates calcium-dependent phosphatidylserine externalization and apoptosis in neurons via its association with TRPC5 (By similarity). Also exhibits magnesium-dependent nuclease activity against double-stranded DNA and RNA but not single-stranded DNA and can enhance DNA decatenation mediated by TOP2A (By similarity). Negatively regulates FcR-mediated phagocytosis in differentiated macrophages (By similarity). May contribute to cytokine-regulated cell proliferation and differentiation (By similarity).

Subcellular Localization: Cell membrane ; Single-pass type II membrane protein . Cell membrane ; Lipid-anchor ; Cytoplasmic side. Nucleus . Cytoplasm . Cytoplasm, perinuclear region .
Note=Localizes to the perinuclear region in the presence of RELT. Palmitoylation regulates its localization to the cell membrane or the nucleus; trafficking to the cell membrane is dependent upon palmitoylation whereas in the absence of palmitoylation, localizes to the nucleus.

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.