

Recombinant Mouse GP174 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51590

Size: 10ug, 100ug

Protein Name: Probable G protein-coupled receptor 174

Synonym: Gpr174, Gm376

UniProt ID: Q3U507

UniProt Link: www.uniprot.org/uniprotkb/Q3U507/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 335 AA

Molecular Weight: 39 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MTDNFTCNKTDGDNTDFRYFIYAVTYTVILVPGLIGNILALWVFYGYMKETKRAVVFMINLAIADLLQIL
SLPLRIFYLNNHDWPFPGPLCMFCFYLYVNMYSIYFLVCISVRRFWFLMYPFRFNDCKQKYDLYIS
IIGWLIICLACLLFPLLRTNDDTPGNRTKCFVDLPIRNVNLAQSVAMITIGEVVGFVTPLMIVLYCTWKTA
LSLQNKYPISQHLGEKKKALKMILTCAGVFLVCFVPYHFSFPLDFLVKSNEIKSCFARRVILIFHSVALC
LASLNSCLDPVIYYFTTNEFRRRLSRQDLPDNIQLHTKSYKIASNHATSTVAAELC

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 Probable G protein-coupled receptor 174 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: G protein-coupled receptor of lysophosphatidylserine (LysoPS) that plays different roles in immune response. Plays a negative role in regulatory T-cell accumulation and homeostasis (PubMed:26077720). Under inflammatory conditions where LysoPS production increases, contributes to the down-regulation of regulatory T-cell activity to favor effector response (PubMed:26077720). Mediates the suppression of IL-2 production in activated T-lymphocytes leading to inhibition of growth, proliferation and differentiation of T-cells (PubMed:29457279). Mechanistically, acts via G(s)-containing heterotrimeric G proteins to trigger elevated cyclic AMP levels and protein kinase A/PKA activity, which may in turn act to antagonize proximal TCR signaling (PubMed:29457279). Plays an important role in the initial period of sepsis through the regulation of macrophage polarization and pro- and anti-inflammatory cytokine secretions (PubMed:30850582). Upon testosterone treatment, acts as a receptor for CCL21 and subsequently triggers through G(q)-alpha and G(12)/G(13) proteins a calcium flux leading to chemotactic effects on activated B-cells (PubMed:31875850). Signals via GNA13 and PKA to promote CD86 up-regulation by follicular B-cells (PubMed:35639700).

Subcellular Localization: Cell membrane; Multi-pass membrane protein.

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.