

Recombinant Mouse GPR39 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51606

Size: 10ug, 100ug

Protein Name: G protein-coupled receptor 39

Synonym: Gpr39

UniProt ID: Q5U431

UniProt Link: www.uniprot.org/uniprotkb/Q5U431/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 456 AA

Molecular Weight: 52 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MASSSGSNHICSRVIDHSHVPEFEVATWIKITLILVYLIIFVVGILGNSVTIRVTQVLQKKGYLQKEVTDH
MVSLACSDILVFLIGMPMEFYSIWNPLTTPSYALSCKLHTFLFETCSYATLLHVLTLSFERYIAICHPFK
YKAVSGPRQVKLLIGFVWVTSALVALPLLFAMGIEYPLVNVPTHKGLNCNLSRTRHHDEPGNSNMSI
CTNLSNRWEVFQSSIFGAFVYLVLASVAFMCWNMMKVLMSKQGTLAGTGPQLQLRKSESEES
RTARRQTIIFRLIVVTLAVCWMPNQIRRIMAAAKPKHDWTRTYFRAYMILLPFSDTFFYLSSVVNPLL
YNVSSQQFRKVFVWQVLCRLTLQHANEKQRARFISTKDSTSSARSPLIFLASRRSNSSSRRTNK
VFLSTFQTEAKPGEAKPQPLSPESPQTGSETKPAGSTTENSLEQEV

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 G protein-coupled receptor 39 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: Zinc-sensing receptor that can sense changes in extracellular Zn(2+), mediate Zn(2+) signal transmission, and participates in the regulation of numerous physiological processes including glucose homeostasis regulation, gastrointestinal mobility, hormone secretion and cell death (PubMed:17030183, PubMed:18180304). Activation by Zn(2+) in keratinocytes increases the intracellular concentration of Ca(2+) and activates the ERK/MAPK and PI3K/AKT signaling pathways leading to epithelial repair (By similarity). Plays an essential role in normal wound healing by inducing the production of cytokines including the major inflammatory cytokine IL6 via the PKC/MAPK/CEBPB pathway (PubMed:31346193). Regulates adipose tissue metabolism, especially lipolysis, and regulates the function of lipases, such as hormone-sensitive lipase and adipose triglyceride lipase (PubMed:21784784). Plays a role in the inhibition of cell death and protects against oxidative, endoplasmic reticulum and mitochondrial stress by inducing secretion of the cytoprotective pigment epithelium-derived growth factor (PEDF) and probably other protective transcripts in a GNA13/RHOA/SRE-dependent manner. Forms dynamic heteroreceptor complexes with HTR1A and GALR1 depending on cell type or specific physiological states, resulting in signaling diversity: HTR1A-GPR39 shows additive increase in signaling along the serum response element (SRE) and NF-kappa-B pathways while GALR1 acts as an antagonist blocking SRE (By similarity).

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.