

# Recombinant Human GPR39 Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP50386

Size: 10ug, 100ug

Protein Name: G protein-coupled receptor 39

Synonym: GPR39

UniProt ID: O43194

UniProt Link: [www.uniprot.org/uniprotkb/O43194/entry](http://www.uniprot.org/uniprotkb/O43194/entry)

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 453 AA

Molecular Weight: 51 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MASPSLPGSDCSQIIDHSHVPEFEVATWIKITLILVYLIIFVMGLLGNSATIRVTQVLQKKGYLQKEVTD  
HMVSLACSDILVFLIGMPMEFYSIWNPLTTSSYTLSCKLHTFLFEACSYATLLHVLTLSEFYIAICHPF  
RYKAVSGPCQVKLLIGFVWVTSALVALPLLFAMGTEYPLVNPVPSHRGLTCNRSSTRHHEQPETSNM  
SICTNLSSRWTVFQSSIFGAFVYLVVLLSVAFCWNMMQVLMKSQKGLAGGTRPPQLRKSESEE  
SRTARRQTIIFLRLIVVTLAVCWMPNQIRRIMAAAKPKHDWTRSYFRAYMILLPFSETFFYLSSVINPLL  
YTVSSQQFRRVFVQVLCCRLSLQHANEKRLRVHAHSTTDSARFVQRPLLFAARRQSSARRTEKIFL  
STFQSEAEPQSKSQSLSELEPNSENGAKPANSAAENGFEHEV

## 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: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 (PubMed:20522546). 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 (By similarity). Regulates adipose tissue metabolism, especially lipolysis, and regulates the function of lipases, such as hormone-sensitive lipase and adipose triglyceride lipase (By similarity). 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 (PubMed:18180304). 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 (PubMed:26365466).

**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.