

Recombinant Mouse GFRAL Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51695

Size: 10ug, 100ug

Protein Name: GDNF family receptor alpha-like

Synonym: Gfral, Gral

UniProt ID: Q6SJE0

UniProt Link: www.uniprot.org/uniprotkb/Q6SJE0/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 393 AA

Molecular Weight: 44 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLVFIFLAVTLSSSENESSSQTNDCAHLIQKCLIDANGCEQSWRSMEDTCLTPGDSCKINNSLHCNLSI
QALVEKNFQFKECLCMDLHCTVKNLFGKKCTNKTNDNMEKDNKDKWNLTTPFYHGFKMQMQSCLE
VTEACVGDVVCNAQLALYLKACSAANGNLCDVKHCQAIRFFYQNMPFNATAQMLAFCDCAQSDIPCQ
QSKETLHSPKALNIVPPPTCLSVIHTRNDELCRTHYRTFQTECWPHITGKCHEDETCISMLGKQDL
TCSGSESCRAAFLGTFTGLVQVPCACRGVTQAEHVCMIFQHMLHLSKSCFNYPNPKDISSYEKK
NSKEITLTGFNSFFNGELLYVVCMVTCGILFLVMLKLRIQSEKRDPSIEIAGGVIIQ

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 GDNF family receptor alpha-like 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: Brainstem-restricted receptor for GDF15 hormone, which triggers an aversive response, characterized by nausea, vomiting, and/or loss of appetite in response to various stresses (PubMed:28846097, PubMed:28846098, PubMed:28846099, PubMed:28953886, PubMed:31152154, PubMed:31928886, PubMed:32723474, PubMed:33593916, PubMed:35202387, PubMed:36630958, PubMed:37380764). The aversive response is both required to reduce continuing exposure to those stresses at the time of exposure and to promote avoidance behavior in the future (PubMed:28846097, PubMed:28846098, PubMed:28846099, PubMed:28953886, PubMed:31928886, PubMed:32723474, PubMed:33593916, PubMed:35202387, PubMed:36630958). The GDF15-GFRAL aversive response is triggered by stresses, such as anticancer drugs (camptothecin or cisplatin), cancers or drugs such as metformin (PubMed:31875646, PubMed:31928886, PubMed:32661391, PubMed:32723474). Upon interaction with its ligand, GDF15, mediates the GDF15-induced autophosphorylation and activation of the RET tyrosine kinase receptor, leading to activation of MAPK- and AKT- signaling pathways (PubMed:28846098, PubMed:28846099, PubMed:32723474, PubMed:33593916). Ligand-binding activates GFRAL-expressing neurons localized in the area postrema and nucleus tractus solitarius of the brainstem (PubMed:28846098, PubMed:28846099, PubMed:31152154, PubMed:32723474). The GDF15-GFRAL signal induces expression of genes involved in metabolism, such as lipid metabolism in adipose tissues (PubMed:32661391).

Subcellular Localization: Cell membrane ; Single-pass membrane protein ; Extracellular side .

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.