

## GFRAL Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P78135
Synonyms:	GFR alpha-like; GFRAL; GRAL; C6orf144
Species:	Human
Source:	HEK293
Accession:	Q6UXV0 (S19-E351)
Gene ID:	389400
Molecular Weight:	48-62 kDa

### PROPERTIES

<b>AA Sequence</b>	<p>S Q T N N C T Y L R    E Q C L R D A N G C    K H A W R V M E D A    C N D S D P G D P C</p> <p>K M R N S S Y C N L    S I Q Y L V E S N F    Q F K E C L C T D D    F Y C T V N K L L G</p> <p>K K C I N K S D N V    K E D K F K W N L T    T R S H H G F K G M    W S C L E V A E A C</p> <p>V G D V V C N A Q L    A S Y L K A C S A N    G N P C D L K Q C Q    A A I R F F Y Q N I</p> <p>P F N I A Q M L A F    C D C A Q S D I P C    Q Q S K E A L H S K    T C A V N M V P P P</p> <p>T C L S V I R S C Q    N D E L C R R H Y R    T F Q S K C W Q R V    T R K C H E D E N C</p> <p>I S T L S K Q D L T    C S G S D D C K A A    Y I D I L G T V L Q    V Q C T C R T I T Q</p> <p>S E E S L C K I F Q    H M L H R K S C F N    Y P T L S N V K G M    A L Y T R K H A N K</p> <p>I T L T G F H S P F    N G E</p>
<b>Biological Activity</b>	<p>1. Immobilized Biotinylated Human GFRAL His at 0.5 µg/mL (100µL/Well) on the plate. Dose response curve for Human GFD15 hFc with the EC<sub>50</sub> of 7.9 ng/mL determined by ELISA.</p> <p>2. Immobilized Human GDF15, His Tag at 1ug/ml (100µL/well) on the plate. Dose response curve for Biotinylated Human GFRAL, His Tag with the EC<sub>50</sub> of 0.08 µg/mL determined by ELISA.</p>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Normally 5% trehalose is added as protectant before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

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## DESCRIPTION

### Background

GFRAL Protein, a brainstem-restricted receptor for GDF15, plays a crucial role in regulating food intake, energy expenditure, and body weight in response to metabolic and toxin-induced stresses. Upon binding to its ligand, GDF15, GFRAL interacts with RET and activates cellular signaling through the MAPK- and AKT-signaling pathways. The receptor, through its extracellular domain, forms complexes with both GDF15 and RET, mediating cellular signaling specifically when RET is engaged after GDF15 binding. This intricate interaction highlights the sequential steps involving GFRAL, GDF15, and RET in the modulation of physiological responses to metabolic challenges.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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