GFRA1/GDNFR-alpha-1 Protein, Rat (HEK293, His)

Cat. No.:	HY-P76949
Synonyms:	GFRα1; GDNF Family Receptor Alpha-1; GFR-Alpha-1; RET Ligand 1; GDNFRA; RETL1; TRNR1
Species:	Rat
Source:	HEK293
Accession:	Q62997-1 (D25-L445)
Gene ID:	25454
Molecular Weight:	Approximately 58-70 kDa due to the glycosylation

PROPERTIES

AA Sequence	D R L D C V K A S D Q C L K E Q S C S T K Y R T L R Q C V A G K E T N F S L T S G L E A K D E C R S A M E A L K Q K S L Y N C R C K R G M K K E K N C L R I Y W S M Y Q S L Q G N D L L E D S P Y E P V N S R L S D I F R A V P F I S D V F Q Q V E H I S K G N N C L D A A K A C N L D D T C K K Y R S A Y I T P C T T S M S N E V C N R R K C H K A L R Q F F D K V P A K H S Y G M L F C S C R D I A C T E R R R Q T I V P V C S Y E E R E R P N C L S L Q D S C K T N Y I C R S R L A D F F T N C Q P E S R S V S N C L K E N Y A D C L L A Y S G L I G T V M T P N Y V D S S S L S V A P W C D C S N S G N D L E D C L K F L N F F K D N T C L K N A I Q A F G N G S D V T M W Q P A P P V Q T T T A T T T T A F R V K N K P L G P A G S E N E I P T H V L P P C A N L Q A Q K L K S N V S G S T H L C L S D S D F G K D G L A G A S S H I T T K S M A A P P S C S L
Biological Activity	Measured in a cell proliferation assay using SH-SY5Y Human neuroblastoma cells. The ED_{50} for this effect is ≤0.8977 μg/mL, corresponding to a specific activity is ≥1114 units/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	GFRA1/GDNFR-alpha-1 Protein serves as a receptor for GDNF and plays a crucial role in mediating the GDNF-induced autophosphorylation and activation of the RET receptor. It is proposed that two molecules of GDNFR-alpha-1 form a complex with the disulfide-linked GDNF dimer and two molecules of RET, suggesting a coordinated mechanism for signal transduction. GFRA1 interacts with RET, facilitating the intricate signaling pathways associated with GDNF-induced responses. Additionally, GFRA1 engages in interactions with SORL1, either alone or in a complex with GDNF. This interaction results in the internalization of GFRA1, without leading to its degradation, indicating a regulatory aspect of GFRA1 dynamics. These molecular interactions highlight the multifaceted role of GFRA1 in mediating GDNF signaling and emphasize its importance in cellular processes.

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