

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GFRα-1/GDNF Rα-1 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant rat GFRα-1 is observed and less than 5% cross-reactivity with recombinant human (rh) GFRα-2, rhGFRα-3, and r
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human GFRα-1/GDNF Rα-1 Met1-Lys429 Accession # NP_665736
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Glial cell line-derived growth factor (GDNF), neurturin (NTN), artemin and persephin are distant members of the TGF-β superfamily. They function as neurotrophic factors for a variety of neuronal populations in the central and peripheral nervous systems. The bioactivities of GDNF and NTN are mediated through a receptor complex composed of the non ligand-binding signaling subunit (c-Ret receptor tyrosine kinase) and either of two ligand binding subunits [GDNF receptor α-1 (GFRα-1) or GFRα-2]. GFRα-1 and -2 are members of a family of at least four cysteine-rich glycosyl-phosphatidylinositol (GPI)-linked cell surface proteins that share conserved placements of many of their cysteine residues. Binding of GDNF to membrane-associated GFRα-1 or GFRα-2 initiates the association with and activation of the Ret tyrosine kinase. Soluble GFRαs released enzymatically from the cell surface-associated protein with phosphatidylinositol phospholipase C, as well as recombinantly produced soluble GFRα-1, can also bind with high-affinity to GDNF and trigger the activation of Ret tyrosine kinase.

Human GFRα-1 cDNA encodes a 465 amino acid (aa) residue protein with an N-terminal 24 aa residue hydrophobic signal peptide. Like other GPI-linked proteins, human GFRα-1 has a C-terminal hydrophobic region which is preceded by a three aa residue (ASS) GPI-binding site. Human GFRα-1 shares 93% aa identity with rat GFRα-1. The expression of the various GFRαs are differentially regulated in the central and peripheral nervous system, suggesting complementary roles for the GFRαs in mediating the activities of the GDNF family of neurotrophic factors.

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