

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat GFR α -1/GDNF R α -1 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse (rm) Ret, recombinant human (rh) GFR α -2, rhGFR α -3 or rmGFR α -2 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 81401
Purification	Protein A or G purified from ascites
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat GFR α -1/GDNF R α -1 Asp25-Leu445 Accession # Q62997
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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) and persephin, distant members of the TGF- β superfamily, are 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 -M (GFR α -1) or GFR α -2). GFR α -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 GFR α -1 or GFR α -2 initiates the association with and activation of the Ret tyrosine kinase. Soluble GFR α s released enzymatically from the cell surface-associated protein with phosphatidylinositol phospholipase C, as well as recombinantly produced soluble GFR α -1, can also bind with high-affinity to GDNF and trigger the activation of Ret tyrosine kinase. Rat GFR α -1 cDNA encodes a 468 amino acid (aa) residue protein with an N-terminal 24 aa residue hydrophobic signal peptide. Like other GPI-linked proteins, rat GFR α -1 has a C-terminal hydrophobic region which is preceded by a three aa residue (ASS) GPI-binding site. Human GFR α -1 shares 93% amino acid identity with rat GFR α -1. The expression of the various GFR α s are differentially regulated in the central and peripheral nervous system, suggesting complementary roles for the GFR α s in mediating the activities of the GDNF family of neurotrophic factors.

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