Human GFRα-3/GDNF Rα-3 Antibody

Monoclonal Mouse IgG_1 Clone # 111004

Catalog Number: MAB6701

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GFRα-3/GDNF Rα-3 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse (rm) GFRα-3 is observed and no cross-reactivity with recombinant human (rh) GFRα-1 or rhGFRα-4 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 111004
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human GFRα−3/GDNF Rα−3 Gly31-Trp382 Accession # AAC24355
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

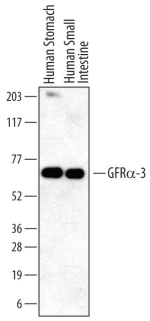
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Human GFRα-3/GDNF Rα-3 by Western Blot. Western blot shows lysates of human stomach tissue and human small intestine tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human GFRα-3/GDNF Rα-3 Monoclonal Antibody (Catalog # MAB6701) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for GFRα-3/GDNF Rα-3 at approximately 65 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Glial cell line-derived growth factor (GDNF), neurturin (NTN), persephin (PEP) and artemin (ART), 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 these neurotrophic factors are mediated through a receptor complex composed of the non ligand-binding signaling subunit (c-Ret receptor tyrosine kinase) and one of four ligand binding cysteine-rich glycosyl-phosphatidylinositol (GPI)-linked cell surface proteins (GFRα-1, 2, 3, or 4). These four GFR-α proteins share conserved placements of many of their cysteine residues. GFRα-1, 2, 3, or 4 have been shown to preferentially bind GDNF, NTN, ART, and PSP, respectively. While the GFRα-3/Ret complex is highly specific for ART, the GFRα-1 /Ret complex is extremely promiscuous and may also be utilized by NTN and ART. Human GFRα-3 cDNA encodes a 400 amino acid (aa) precursor protein with an N-terminal signal peptide and C-terminal hydrophobic domain. GFRα-3 is approximately 34% and 36% identical to GFRα-1 and GFRα-2, respectively. Human and mouse GFRα-3 share approximately 76% aa sequence homology. The gene encoding GFRα-3 has been localized to human chromosome 5. GFRα-3 is expressed at high levels in the developing and adult sensory and sympathetic ganglia of the peripheral nervous system. It is also expressed in non-neural tissues and may show tissue-specific differences in molecular weight. In the trigeminal ganglions, the expression of GFRα-3 is found in a population of neurons distinct from those expressing GFRα-1 or 2.

References:

1. Baloh, R. *et al.* (1998) Neuron **21**:1291.
2. Baloh, R. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95**:5801.
3. Worby, C. *et al.* (1998) J. Biol. Chem. **273**:3502.

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