

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human GFR $\alpha$ -3/GDNF R $\alpha$ -3 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse (rm) GFR $\alpha$ -3 is observed and no cross-reactivity with recombinant human (rh) GFR $\alpha$ -1 or r  |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 111004                                                                                                                                                                                                                            |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human GFR $\alpha$ -3/GDNF R $\alpha$ -3<br>Gly31-Trp382<br>Accession # AAC24355                                                                                                                    |
| <b>Conjugate</b>          | Alexa Fluor 750<br>Excitation Wavelength: 749 nm<br>Emission Wavelength: 775 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

#### 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), persephin (PEP) and artemin (ART), distant members of the TGF- $\beta$  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 (GFR $\alpha$ -1, 2, 3, or 4). These four GFR- $\alpha$  proteins share conserved placements of many of their cysteine residues. GFR $\alpha$ -1, 2, 3, or 4 have been shown to preferentially bind GDNF, NTN, ART, and PSP, respectively. While the GFR $\alpha$ -3/Ret complex is highly specific for ART, the GFR $\alpha$ -1/Ret complex is extremely promiscuous and may also be utilized by NTN and ART. Human GFR $\alpha$ -3 cDNA encodes a 400 amino acid (aa) precursor protein with an N-terminal signal peptide and C-terminal hydrophobic domain. GFR $\alpha$ -3 is approximately 34% and 36% identical to GFR $\alpha$ -1 and GFR $\alpha$ -2, respectively. Human and mouse GFR $\alpha$ -3 share approximately 76% aa sequence homology. The gene encoding GFR $\alpha$ -3 has been localized to human chromosome 5. GFR $\alpha$ -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 GFR $\alpha$ -3 is found in a population of neurons distinct from those expressing GFR $\alpha$ -1 or 2.

#### PRODUCT SPECIFIC NOTICES

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