

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Ret in Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Ret Leu29-Arg637 (Phe174Ser) Accession # P35546
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

## 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse Ret Fc Chimera (Catalog # 482-RT)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

The GDNF family of neurotrophic factors constitute a new family of factors within the TGF-β superfamily. These proteins are potent survival factors for various central and peripheral neurons during development and in the adult animal. The GDNF family members (GDNF, neurturin and persephin) signal through multicomponent receptors that consist of the Ret receptor tyrosine kinase and one of four glycosyl-phosphatidylinositol (GPI)-linked ligand-binding subunits (GFRα-1-4). GFRα-1, -2, and -4 are the preferred ligand-binding subunits for GDNF, neurturin and persephin, respectively. To date, the preferred ligand for GFRα-3 has not been identified. The Ret tyrosine-kinase receptor is encoded by the *c-ret* proto-oncogene. Mutations of the *ret* gene have been associated with various human diseases affecting tissues derived from the neural crest, including Hirschsprung's disease, multiple endocrine neoplasia MEN2A and MEN2B, and familial medullary thyroid carcinoma. Mouse Ret cDNA encodes a 1115 amino acid (aa) residue transmembrane tyrosine kinase with a 28 aa residue signal peptide, a 609 aa residue cysteine-rich extracellular domain and a 456 aa residue cytoplasmic domain. A cadherin-related sequence is also present in the extracellular domain of Ret. Human and mouse Ret share 83% amino acid sequence homology (77% homology in the extracellular domain and 93% homology in the cytoplasmic domain). Although Ret does not bind GDNF ligands directly, the extracellular domain of Ret binds the GDNF-GFR-α complex with high affinity and is a potent GDNF antagonist in the presence of soluble GFR-α.

### References:

1. Trupp, M. *et al.* (1998) *Mol. Cell Neurosci.* **11**:47.
2. Enokido, Y. *et al.* (1998) *Curr. Biol.* **8**:1019.
3. Carlomagno, F. *et al.* (1998) *Endocrinology*, **139**:3613.