

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse GFR $\alpha$ -3/GDNF R $\alpha$ -3 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant human GFR $\alpha$ -3 is observed and less than 2% cross-reactivity with recombinant mouse (rm) GFR $\alpha$ -2, rmGFR $\alpha$ -4, and recombinant rat GFR $\alpha$ -1 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse GFR $\alpha$ -3/GDNF R $\alpha$ -3 Glu34-Arg379 Accession # AAB70931
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 $\mu$ m filtered solution in PBS.

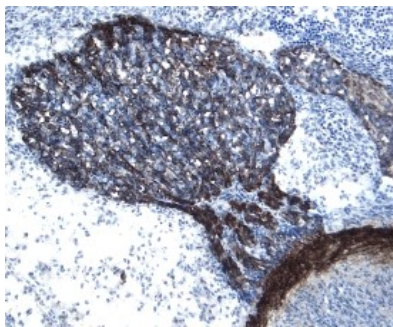
## APPLICATIONS

**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
<b>Western Blot</b>	0.1 $\mu$ g/mL	Recombinant Mouse GFR $\alpha$ -3/GDNF R $\alpha$ -3 Fc Chimera (Catalog # 2645-FR)
<b>Immunohistochemistry</b>	5-15 $\mu$ g/mL	See Below

## DATA

### Immunohistochemistry



**GFR $\alpha$ -3/GDNF R $\alpha$ -3 in Mouse Embryo.** GFR $\alpha$ -3/GDNF R $\alpha$ -3 was detected in immersion fixed frozen sections of mouse embryo (15 d.p.c.) using 15  $\mu$ g/mL Goat Anti-Mouse GFR $\alpha$ -3/GDNF R $\alpha$ -3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF2645) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to developing dorsal root ganglion and spinal cord. View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

## 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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<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**

Mouse glial cell line-derived neurotrophic factor (GDNF) family receptor alpha 3 (GFR $\alpha$ -3) is a member of the GDNF family of receptors. It is one of four known members, all of which contain three conserved cysteine repeats (1, 3, 4). It is synthesized as a 397 aa precursor, with a hydrophobic signal sequence of 28 aa, a 343 aa mature segment, and a propeptide segment of 26 aa that is removed in the mature protein. The mature globular membrane glycoprotein has an approximate molecular weight of 50 kDa (5), contains three potential *N*-linked glycosylation sites, and a hydrophobic stretch of residues at its COOH terminus that comprises a GPI linkage sequence (2, 3, 5). Mouse GFR $\alpha$ -3 shares 81% aa sequence identity with human GFR $\alpha$ -3. High-level expression of GFR $\alpha$ -3 is observed only during early stages of neurogenesis in the central nervous system and in developing and adult peripheral nerves, organs, and ganglia (2, 3, 5, 7). The expression and proportions of GFR $\alpha$ -3 are closely linked to those of the Ret receptor tyrosine kinase, particularly in the trigeminal ganglion, pituitary gland, thymus, lung, and duodenum (3). GFR $\alpha$ -3 associates with Ret to form the receptor complex for the GDNF family ligand artemin, which, in turn, activates the complex (1, 6, 7). The activated complex's signal is required for the development and maintenance of superior cervical ganglion (SCG), specifically the rostral migration of SCG precursors between embryonic days 11.5 and 14.5, and the survival of SCG neurons after birth (8).

**References:**

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