Human/Mouse GFRα-2/GDNF Rα-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF429

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse GFRα-2/GDNF Rα-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human GFRα-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse GFRα-2/GDNF Rα-2 Ser22-Ser441 Accession # Q3UUD8
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 either lyophilized or as a 0.2 µm filtered solution in PBS.

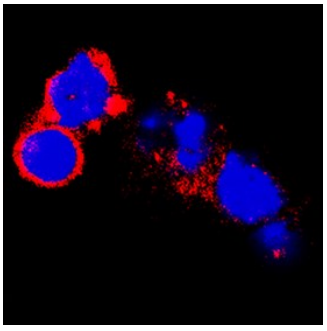
APPLICATIONS

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	0.1 µg/mL	Recombinant Mouse GFRα-2/GDNF Rα-2 Fc Chimera (Catalog # 429-FR)
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 1-3 µg/mL of this antibody will block 50% of the binding of 2 ng/mL of Recombinant Human GDNF (Catalog # 212-GD) to immobilized Recombinant Mouse GFRα-2 Fc Chimera (Catalog # 429-FR) coated at 1 µg/mL (100 µL/well). At 15 µg/mL, this antibody will block >90% of the binding.	

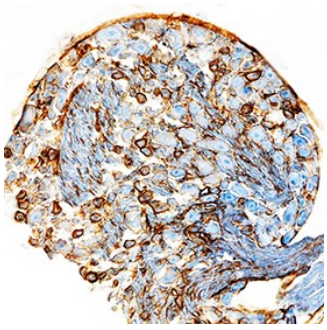
DATA

Immunocytochemistry



GFRα-2/GDNF Rα-2 in Mouse Splenocytes. GFRα-2/GDNF Rα-2 was detected in immersion fixed mouse splenocytes using Goat Anti-Human/Mouse GFRα-2/GDNF Rα-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF429) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to plasma membrane. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Immunohistochemistry



GFRα-2/GDNF Rα-2 in Mouse Dorsal Root Ganglion. GFRα-2/GDNF Rα-2 was detected in perfusion fixed frozen sections of mouse dorsal root ganglion using Goat Anti-Human/Mouse GFRα-2/GDNF Rα-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF429) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to plasma membrane of sensory neurons. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human/Mouse GFRα-2/GDNF Rα-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF429

BACKGROUND

Glial cell line-derived growth factor (GDNF), neurturin (NTN), persephin (PSP) and artemin, 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-1 (GFRα-1, also known as Trn R1) or GFRα-2 (also known as Trn R2). GFRα-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 or NTN to membrane-associated GFRα-1 or GFRα-2 initiates the association with and activation of the Ret tyrosine kinase.

Mouse GFRα-2 cDNA encodes a 463 amino acid (aa) residue protein with a putative N-terminal 21 aa residue hydrophobic signal peptide. Like other GPI-linked proteins, rat GFRα-2 has a C-terminal hydrophobic region which is preceded by a 3 aa residue (SGS) GPI-binding site. Human GFRα-2 shares 96.5% amino acid identity with mouse GFRα-2. The expression of the various GFRαs are differentially regulated in the central and peripheral nervous system, suggesting complementary roles for the GFRαs in mediating the activities of the GDNF family of neurotrophic factors.

References:

1. Thompson, J. *et al.* (1998) Mol. Cell Neurosci. **11:**117.
2. Trupp, M. *et al.* (1998) Mol. Cell Neurosci. **11:**47.
3. Baloh, R.H. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95:**5801.
4. Baloh, R.H. *et al.* (1998) Neuron **21**:1291.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449