

GFRA2 Antibody / GDNF family receptor alpha 2 (FY12896)

Catalog No.	Formulation	Size
FY12896	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	O00451
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This GFRA2 antibody is available for research use only.

Description

GFRA2 antibody detects GDNF family receptor alpha 2, a glycosylphosphatidylinositol (GPI)-anchored receptor involved in neurotrophic signaling. Encoded by the GFRA2 gene on chromosome 8p21.3, this receptor mediates cell surface binding and signal transduction of neurturin, a member of the glial cell line-derived neurotrophic factor (GDNF) family. GFRA2 functions as a co-receptor with the transmembrane tyrosine kinase RET, promoting neuronal survival, differentiation, and axonal growth in both the central and peripheral nervous systems.

Structurally, GFRA2 is a 464-amino-acid protein of approximately 50 kilodaltons, containing three cysteine-rich domains (D1-D3) essential for ligand binding. It is tethered to the cell membrane through a GPI anchor and can also exist in soluble form, allowing it to modulate neurotrophic signaling in paracrine or autocrine contexts. GFRA2 expression is enriched in parasympathetic and sensory neurons, as well as cardiac and enteric ganglia, where it contributes to neural patterning and regeneration.

The GFRA2 antibody is widely used in neurobiology, regenerative medicine, and developmental neuroscience research to

study trophic signaling, axonal repair, and neuronal differentiation. Western blot analysis detects a 50 kilodalton band corresponding to GFRA2, while immunofluorescence reveals strong membrane and axonal staining in neuronal cultures and ganglia. This antibody supports studies exploring neurotrophic receptor distribution and GDNF family signaling networks.

Functionally, GFRA2 mediates the effects of neurturin by recruiting RET and activating downstream MAPK and PI3K/AKT pathways that support neuronal survival and neurite outgrowth. Dysregulation of GFRA2 signaling has been linked to neurodegenerative disorders and impaired regeneration following nerve injury. It also plays a role in cardiac innervation and development through guidance of parasympathetic neurons. The GFRA2 antibody enables detailed analysis of these pathways and helps characterize therapeutic responses in models of neural injury and neuroprotection. NSJ Bioreagents validates this antibody for western blotting, immunohistochemistry, and immunofluorescence, ensuring sensitive and reproducible results in neuronal and regenerative research.

Application Notes

Optimal dilution of the GFRA2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GFRA2 recombinant protein (Position: E30-L425) was used as the immunogen for the GFRA2 antibody.

Storage

After reconstitution, the GFRA2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.