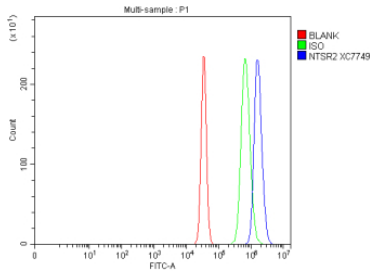
NTSR2 Antibody / Neurotensin receptor type 2 (FY13140)

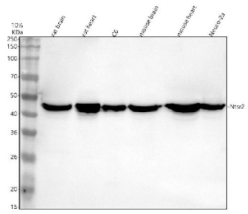
Catalog No.	Formulation	Size
FY13140	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
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 Na2HPO4.
UniProt	P70310
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This NTSR2 antibody is available for research use only.



Flow Cytometry analysis of Neuro-2a cells using anti-NTSR2 antibody. Overlay histogram showing Neuro-2a cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NTSR2 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of NTSR2 using anti-NTSR2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat brain tissue lysates, Lane 2: rat heart tissue lysates, Lane 3: rat C6 whole cell lysates, Lane 4: mouse brain tissue lysates, Lane 5: mouse heart tissue lysates, Lane 6: mouse Neuro-2a whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NTSR2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. A specific band was detected for NTSR2 at approximately 45 kDa. The expected molecular weight of NTSR2 is ~45 kDa.

Description

NTSR2 antibody detects Neurotensin receptor type 2, a G protein-coupled receptor (GPCR) that mediates the effects of the neuropeptide neurotensin on neuronal activity, pain modulation, and inflammation. The UniProt recommended name is Neurotensin receptor type 2 (NTSR2). This receptor couples to G proteins to trigger intracellular calcium mobilization and MAPK pathway activation in response to neurotensin binding.

Functionally, NTSR2 antibody identifies a 410-amino-acid seven-transmembrane receptor localized primarily in the central nervous system and peripheral tissues. NTSR2 regulates dopaminergic signaling, nociception, and gastrointestinal motility. It is distinct from NTSR1 in its lower affinity for neurotensin and its unique coupling to Gq and Gi proteins, leading to both excitatory and inhibitory cellular effects.

The NTSR2 gene is located on chromosome 2p25.1 and is highly expressed in the brainstem, hypothalamus, and spinal cord. Peripheral expression in immune cells and smooth muscle contributes to neuroimmune and cardiovascular regulation. NTSR2 activation influences neurotransmitter release, stress response, and vascular tone.

Pathologically, dysregulation of NTSR2 signaling has been associated with pain disorders, schizophrenia, addiction, and cancer progression. Its activation promotes cell migration and survival in certain tumors. Research using NTSR2 antibody supports studies in neuroscience, signal transduction, and receptor pharmacology.

NTSR2 antibody is validated for western blotting, immunohistochemistry, and immunofluorescence to detect GPCRs and neuropeptide receptors. NSJ Bioreagents provides NTSR2 antibody reagents optimized for neurobiology, pharmacology, and signal transduction research.

Structurally, Neurotensin receptor type 2 features seven transmembrane helices typical of GPCRs, an extracellular ligand-binding region, and an intracellular tail that interacts with G proteins and arrestins. This antibody enables investigation of NTSR2's regulatory role in neurotransmission and cellular signaling.

Application Notes

Optimal dilution of the NTSR2 antibody should be determined by the researcher.

Immunogen

E.coli-derived mouse NTSR2 recombinant protein (Position: Q176-E392) was used as the immunogen for the NTSR2 antibody.

Storage

After reconstitution, the NTSR2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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