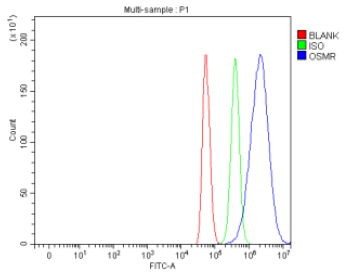
Osmr Antibody / Oncostatin M receptor (FY12584)

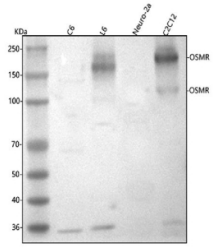
Catalog No.	Formulation	Size
FY12584	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	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	O70458
Applications	ELISA : 0.1-0.5ug/ml Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This Osmr antibody is available for research use only.



Flow Cytometry analysis of C2C12 cells using anti-Osmr antibody. Overlay histogram showing C2C12 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-Osmr 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 (Red line) was also used as a control.



Western blot analysis of Osmr using anti-Osmr antibody. Lane 1: rat C6 whole cell lysates, Lane 2: rat L6 whole cell lysates, Lane 3: mouse Neuro-2a whole cell lysates, Lane 4: mouse C2C12 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-Osmr 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 enhanced chemiluminescent. Western blot analysis of mouse and rat lysates probed with anti-OSMR shows a major band at ~110 kDa and a higher 170-200 kDa band corresponding to the mature N-glycosylated receptor. OSMR expression is present in rat L6 and mouse C2C12 myoblasts but minimal in rat C6 and mouse Neuro-2a cells, consistent with its tissue-specific expression pattern.

Description

OSMR antibody detects Oncostatin M receptor, a cytokine receptor that forms part of the type I cytokine receptor family and mediates signaling by the cytokines oncostatin M and interleukin-31. OSMR dimerizes with either gp130 or IL31RA to initiate downstream JAK-STAT, MAPK, and PI3K signaling cascades. The OSMR antibody is widely used in immunology, inflammation, and cancer research to study cytokine signaling, tissue remodeling, and immune regulation.

OSMR is encoded by the OSMR gene on human chromosome 5p13.1. The protein is approximately 100 kilodaltons and contains an extracellular cytokine-binding domain, a single transmembrane helix, and a cytoplasmic tail harboring signaling motifs that recruit JAK kinases and STAT transcription factors. OSMR is expressed in a wide range of cell types, including epithelial cells, fibroblasts, and immune cells, where it mediates diverse biological responses to inflammatory cues.

An OSMR antibody detects a 100-200 kilodalton band by western blot and exhibits membrane and perinuclear staining under immunofluorescence. Ligand binding induces heterodimerization of OSMR with gp130 or IL31RA, leading to phosphorylation of JAK1 and JAK2 and subsequent activation of STAT3 and STAT5 transcription factors. These pathways regulate genes involved in cell proliferation, differentiation, and extracellular matrix remodeling.

In the immune system, OSMR signaling modulates macrophage activation, Th2 cytokine production, and inflammation resolution. In epithelial tissues, OSMR promotes wound healing and regeneration but, when overactivated, contributes to chronic inflammation and fibrosis. Dysregulation of OSMR expression has been linked to psoriasis, asthma, and several cancers, where it enhances tumor progression through paracrine cytokine signaling.

Because of its dual role in inflammation and tissue regeneration, OSMR represents an important biomarker and therapeutic target in immune-mediated and neoplastic diseases. NSJ Bioreagents provides a validated OSMR antibody optimized for its applications, supporting research into cytokine receptor signaling, inflammatory pathways, and cancer biology.

Application Notes

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

Immunogen

E.coli-derived mouse Osmr recombinant protein (Position: E673-Q968) was used as the immunogen for the Osmr antibody.

Storage

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