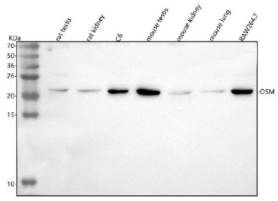
Osm Antibody / Oncostatin M (FY13253)

Catalog No.	Formulation	Size
FY13253	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	Q65Z15
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This Osm antibody is available for research use only.



Western blot analysis of Osm using anti-Osm antibody. Lane 1: rat testis tissue lysates, Lane 2: rat kidney tissue lysates, Lane 3: rat C6 whole cell lysates, Lane 4: mouse tetis tissue lysates, Lane 5: mouse kidney tissue lysates, Lane 6: mouse lung tissue lysates, Lane 7: mouse RAW264.7 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-Osm 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. A predominant band is detected at an approximately 22 kDa in all samples, consistent with the C-terminally processed mature form of OSM, which has been reported to migrate between ~22 and 28 kDa depending on proteolytic processing and glycosylation.

Description

OSM antibody detects Oncostatin M, a multifunctional cytokine belonging to the interleukin 6 (IL6) family that regulates

inflammation, hematopoiesis, and tissue remodeling. The UniProt recommended name is Oncostatin M (OSM). This secreted glycoprotein signals through type I and type II OSM receptors to activate the JAK/STAT, MAPK, and PI3K pathways, influencing diverse biological processes including immune regulation, bone metabolism, and liver regeneration.

Functionally, OSM antibody identifies a 252-amino-acid cytokine produced primarily by activated T cells, macrophages, and monocytes. Upon secretion, OSM binds to receptor complexes composed of gp130 and OSMRbeta or LIFRbeta, initiating downstream phosphorylation of STAT3 and STAT5 transcription factors. These pathways promote expression of acute-phase proteins, matrix metalloproteinases, and cell differentiation genes. OSM plays critical roles in inflammation, angiogenesis, and wound repair by modulating fibroblast proliferation, endothelial activation, and extracellular matrix production.

The OSM gene is located on chromosome 22q12.2 and is broadly expressed in immune, endothelial, and stromal cells under inflammatory or injury conditions. Expression increases in response to IL1beta, TNFalpha, and lipopolysaccharides, linking OSM production to innate and adaptive immune responses. OSM participates in crosstalk between immune cells and tissue-resident fibroblasts, coordinating local inflammatory responses and tissue regeneration.

Pathologically, dysregulated OSM signaling contributes to chronic inflammation, fibrosis, and cancer. Elevated levels are associated with rheumatoid arthritis, atherosclerosis, and multiple sclerosis. In cancer, OSM exhibits context-dependent effects, acting as both a tumor suppressor and promoter by influencing cell proliferation and metastasis. Research using OSM antibody supports studies in cytokine signaling, inflammatory disease, and tumor biology.

OSM antibody is validated for ELISA, western blotting, and immunohistochemistry to detect cytokines in immune and stromal contexts. NSJ Bioreagents provides OSM antibody reagents optimized for research in interleukin signaling, fibrosis, and inflammatory tissue response.

Structurally, Oncostatin M contains a four-helix bundle cytokine fold stabilized by disulfide bridges and glycosylation sites essential for receptor binding and stability. The C-terminal domain interacts with gp130-containing receptor complexes to initiate signal transduction. This antibody enables detailed analysis of OSM's role in immune signaling, cytokine regulation, and tissue repair.

Application Notes

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

Immunogen

E.coli-derived rat Osm recombinant protein (Position: E55-D158) was used as the immunogen for the Osm antibody.

Storage

After reconstitution, the Osm 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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