# 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**

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|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | 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 Na2HPO4. |
| **UniProt** | Q65Z15 |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This Osm antibody is available for research use only. |

## 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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