

## OSM, Rat

**Cat. No.:** Z03144-1

**Size:** 1.0 mg

**Synonyms:** OSM

### Description:

Oncostatin M (OSM) is a multifunctional cytokine, and belongs to Interleukin-6 (IL-6) subfamily, which also includes IL-11, leukemia inhibitory factor (LIF), ciliary neurotropic factor, cardiotrophin-1, and novel neurotrophin-1. *In vivo*, OSM is secreted from activated T cells, monocytes, neutrophils, and endothelial cells. OSM is related to LIF, and shares a receptor with LIF in human. Human OSM can bind to gp130 and recruit OSM Receptor  $\beta$  or LIF Receptor  $\beta$  to form a ternary complex. OSM stimulates the growth of different types of cells, including megakaryocytes, fibroblasts, vascular endothelial cells, and T cells. OSM inhibits the proliferation of several cancer cell lines, such as solid tissue tumor cells, lung cancer cells, melanoma cells, and breast cancer cells. Recombinant Rat Oncostatin M (rrOSM) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 215 amino acids. A fully biologically active molecule, rrOSM has a molecular mass of 24.5 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Amino Acid Sequence:

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00001 MKRGCSSSSP KLLSQLKSQA NITGNTASLL EPYILHQNLN
00041 TLTLRAACTE HPVAFPSEDM LRQLSKPDFL STVHATLGRV
00081 WHQLGAFRQQ FPKIQDFPEL ERARQNIQGI RNNVYCMARL
00121 LHPPLEIPEP TQADSGTSRP TTTAPGIFQI KIDSCRFLWG
00161 YHRFMGSGVR VFEWGDGSR RSRRHSP LWA WLKGDHRIRP
00201 SRSSQSAMLR SLVPR
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**Source:** *E. coli*

**Species:** Rat

**Biological Activity:** ED<sub>50</sub> < 10 ng/mL, measured by a cell proliferation assay using Rat Embryo Brain cells, corresponding to a specific activity of > 1 × 10<sup>5</sup> units/mg.

**Molecular Weight:** 24.5 kDa, observed by reducing SDS-PAGE.

**Formulation:** Lyophilized after extensive dialysis against PBS.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O or PBS at 100 µg/ml.

**Purity:** > 95% as analyzed by SDS-PAGE and HPLC.

**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.

**Storage:** Lyophilized recombinant Rat Oncostatin M (rrOSM) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrOSM remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.