



Recombinant Human Oncostatin M (196aa)

20180507BB

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

| | |
|------------------|----------------------------|
| Cat.-no.: | 100-162 |
| Size: | 10 µg |
| Lot. No.: | According to product label |

Scientific Background

| | |
|------------------------|------|
| Gene-ID (NCBI): | 5008 |
| Synonyms: | OSM |

Oncostatin M (OSM) is a growth and differentiation factor that participates in the regulation of neurogenesis, osteogenesis and hematopoiesis. Produced by activated T cells, monocytes and Kaposi's sarcoma cells, OSM can exert both stimulatory and inhibitory effects on cell proliferation. It stimulates the proliferation of fibroblasts, smooth muscle cells and Kaposi's sarcoma cells, but inhibits the growth of some normal and tumor cell lines. It also promotes cytokine release (e.g. IL-6, GM-CSF and G-CSF) from endothelial cells, and enhances the expression of low-density lipoprotein receptors in hepatoma cells. OSM shares several structural and functional characteristics with LIF, IL-6, and CNTF. Human OSM is active on murine cells. The human OSM gene encodes for a 252 amino acid polypeptide, containing 25 amino acid signal sequence for secretion and a 227 precursor protein. Proteolytic processing of this precursor removes an 18 amino acid C-terminal peptide, and generates the mature OSM form. Recombinant human Oncostatin M (196 a.a.) is a HEK293 cell derived, 196 amino-acid length glycoprotein that has a calculated theoretical molecular weight of 22.2 kDa, but migrates at an apparent molecular weight of 32-34 kDa by SDS-PAGE analysis under reducing conditions due to glycosylation.

Sequence

```
AAIGSCSKEY RVLGGQLQKQ TDLMQDTSRL LDPYIRIQGL
DVPKLRHCR ERPGAFPSEE TLRGLGRRGF LQTLNATLGC
VLHRLADLEQ RLPKAQDLER SGLNIEDLEK LQMARPNILG
LRNNIYCMAQ LLDNSDTAEP TKAGRGASQP PTPTPASDAF
QRKLEGCRFL HGYHRFMHSV GRVFSKWGES PNRSR
```

Database References

| | |
|------------------------|-------------|
| Protein RefSeq: | NP_065391.1 |
| Uniprot ID: | P13725 |
| mRNA RefSeq: | NM_020530.4 |

Product Specifications

| | |
|------------------------|-----------------------------------|
| Expressed in | HEK293 cells |
| Purity | > 98% by SDS-PAGE & HPLC analyses |
| Endotoxin level | < 0.1 ng/µg of protein (<1EU/µg). |
| Formulation | lyophilized |
| Length (aa): | 196 |
| MW: | 32-34 kDa (reducing conditions) |

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 6 months at -20°C to -80°C.

Reconstitution: Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Biological Activity: Determined by its ability to stimulate the proliferation of human TF-1 cells. The expected ED₅₀ is ≤ 2.0 ng/ml, corresponding to a specific activity of ≥ 5 x 10⁵ units/mg.