

# Recombinant Human OSM Protein

Cat. No. OSM-31H    Lot. No. (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant human oncostatin M (OSM) protein without tag was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                         | Animal-free (AOF) and carrier protein-free.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                         | Mass spectrometry: single species with expected mass.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                         | Analytical reversed-phase: single sharp peak.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                         | Recovery from stock vial: >95%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>      | <p>This gene encodes a member of the leukemia inhibitory factor/oncostatin-M (LIF/OSM) family of proteins. The encoded preproprotein is proteolytically processed to generate the mature protein. This protein is a secreted cytokine and growth regulator that inhibits the proliferation of a number of tumor cell lines. This protein also regulates the production of other cytokines, including interleukin 6, granulocyte-colony stimulating factor and granulocyte-macrophage colony stimulating factor in endothelial cells. This gene and the related gene, leukemia inhibitory factor, also present on chromosome 22, may have resulted from the duplication of a common ancestral gene. Alternative splicing results in multiple transcript variants, at least one of which encodes an isoform that is proteolytically processed.</p> |
| <b>Molecular Mass</b>   | 22 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|                       |                                                                                                                                         |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>      | <0.005 EU/μg protein (below level of detection)                                                                                         |
| <b>Applications</b>   | Tumor organoid culture; epithelial organoid culture (WNR media); Stem cell Differentiation into neural and microglial lineages          |
| <b>Storage</b>        | Resuspend in water at >100 μg/mL, prepare single use aliquots, add carrier protein if desired and store frozen at -20 or -80 centigrade |
| <b>Storage Buffer</b> | Lyophilized from acetonitrile, TFA                                                                                                      |

## GENE INFORMATION

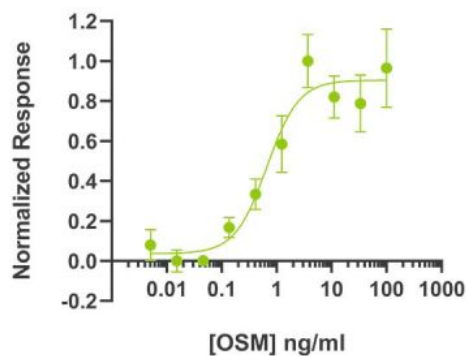
|                        |                                           |
|------------------------|-------------------------------------------|
| <b>Gene Name</b>       | OSM oncostatin M [ Homo sapiens (human) ] |
| <b>Official Symbol</b> | OSM                                       |
| <b>Synonyms</b>        | OSM; oncostatin M; oncostatin-M           |
| <b>Gene ID</b>         | 5008                                      |
| <b>mRNA Refseq</b>     | NM_020530                                 |
| <b>Protein Refseq</b>  | NP_065391                                 |
| <b>MIM</b>             | 165095                                    |
| <b>UniProt ID</b>      | P13725                                    |

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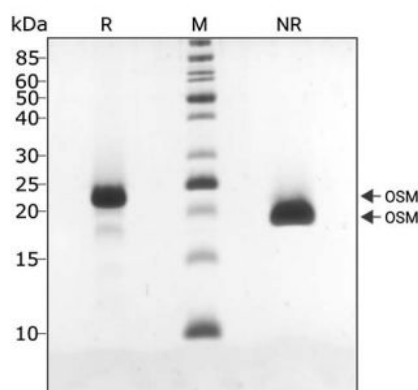
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## Bioactivity



OSM activity is determined using the serum response element luciferase reporter assay in transfected HEK293T cells. EC<sub>50</sub> = 0.75 ng/mL (34 pM). Cells are treated in triplicate with a serial dilution of OSM for 6 hours. Firefly luciferase activity is measured and normalized to the control Renilla luciferase activity.

## Purity



OSM migrates as a single band at 20 kDa in non-reducing conditions and 22 kDa upon reduction (R). The slight band under the main band in the reduced sample is likely an artefact of the reduction protocol. No contaminating protein bands are visible.

Purified recombinant protein was resolved using 15% w/v SDS-PAGE in reduced and non-reduced conditions and stained with Coomassie Brilliant Blue R250.

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