

Cytokines

Human Recombinant Oncostatin M

Oncostatin M



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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

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Catalog # 78094
78094.1

10 µg
50 µg

Product Description

Oncostatin M (OSM) is a member of interleukin 6 (IL-6) family of cytokines and bears close resemblance to leukemia-inhibitory factor (LIF) and granulocyte colony-stimulating factor (G-CSF) in amino acid sequence and its modulation of differentiation in a variety of cell types (Rose & Bruce). OSM signals through type I receptor (consisting of gp130 and LIF receptor (LIFR)) and type II receptor (consisting of gp130 and OSM receptor (OSMR)), which eventually activate the JAK/STAT pathway (Auguste et al.; Gómez-Lechón). OSM is primarily produced by activated T cells and monocytes, and also by activated macrophages, neutrophils, mast cells, and dendritic cells. OSM is also produced within the bone microenvironment by cells of both hematopoietic and mesenchymal origin including osteocytes and osteoblasts. OSM is involved in differentiation, cell proliferation, hematopoiesis, and inflammation, and also has been shown to have implications in liver development, bone formation and resorption (Sims & Quinn; Tanaka & Miyajima).

Product Information

Alternative Names: OSM

Accession Number: P13725

Amino Acid Sequence: MAAIGSCSKE YRVLLGQLQK QTDLMQDTSR LLDPIYIRIQG LDVPKLREHC RERPGAFPSE ETLRGLGRRG
FLQTLNATLG CVLHRLADLE QRLPKAQDLE RSGLNIEDLE KLQMARPNI LGLRNNIYCMA QLLDNSDTAE
PTKAGRGASQ PPTPTPASDA FQRKLEGCRF LHGYHRFMHS VGRVFSKWGE SPNRSRRHSP HQALRKGVRR
TRPSRKGKRL MTRGQLPR

Predicted Molecular Mass: 25.9 kDa

Species: Human

Cross Reactivity: Mouse

Formulation: Lyophilized after dialysis against phosphate-buffered saline.

Source: E. coli

Specifications

Activity: The specific activity is $\geq 1 \times 10^5$ units/mg ($EC_{50} \leq 10$ ng/mL) as determined by a cell proliferation assay of TF-1 cells.

Purity: $\geq 95\%$

Endotoxin Level: Measured by kinetic limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

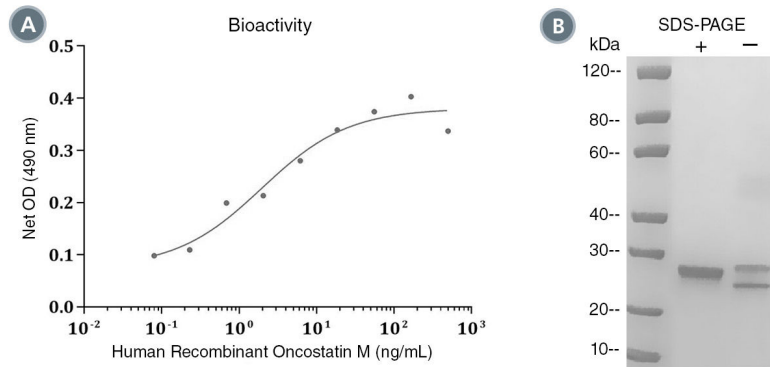
Preparation and Storage

Storage: Store at -80°C .

Stability: Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Resuspend the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at $2 - 8^\circ\text{C}$ for up to 2 weeks or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant Oncostatin M was tested by its ability to promote the proliferation of TF-1 cells. Cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the example above is less than 10 ng/mL.

(B) 2 µg of Human Recombinant Oncostatin M was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant Oncostatin M has a predicted molecular mass of 25.9 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

- Auguste P et al. (1997) Signaling of type II oncostatin M receptor. *J Biol Chem* 272(25): 15760–4.
- Gómez-Lechón MJ. (1999) Oncostatin M: signal transduction and biological activity. *Life Sci* 65(20): 2019–30.
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