Cytokines

Human Recombinant
Oncostatin M, ACF

Oncostatin M, animal component-free

Catalog #	78199	10 µg
	78199.1	100 µg
	78199.2	1000 µg

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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 and bone formation and resorption (Sims & Quinn; Tanaka & Miyajima). This product is animal component-free.

Product Information

Alternative Names:	MGC20461, OSM, Onc-M
Accession Number:	P13725
Amino Acid Sequence:	MAAIGSCSKE YRVLLGQLQK QTDLMQDTSR LLDPYIRIQG LDVPKLREHC RERPGAFPSE ETLRGLGRRG FLQTLNATLG CVLHRLADLE QRLPKAQDLE RSGLNIEDLE KLQMARPNIL GLRNNIYCMA QLLDNSDTAE PTKAGRGASQ PPTPTPASDA FQRKLEGCRF LHGYHRFMHS VGRVFSKWGE SPNRSRRHSP HQALRKGVRR
Predicted Molecular Mass:	23.8 kDa
Species:	Human
Cross Reactivity:	Reported to be species-specific
Formulation:	Lyophilized from a sterile-filtered solution containing sodium phosphate, pH 7.5.
Source:	E. coli

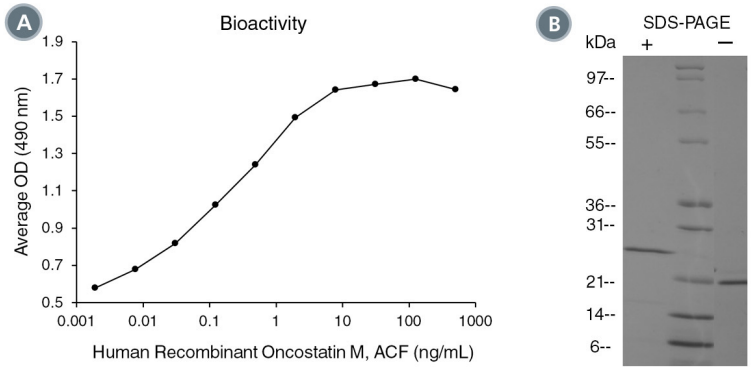
Specifications

Activity:	The specific activity is ≥ 2.5 x 10^5 units/mg (EC50 ≤ 4 ng/mL) as determined by a cell proliferation assay using TF-1 cells.
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage:	Store at -20°C to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute 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. OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant Oncostatin M, ACF 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 cytokine at which cell proliferation is at 50% of maximum. The EC50 in the example above is 0.21 ng/mL.
(B) 1 µg of Human Recombinant Oncostatin M, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant Oncostatin M, ACF has a predicted molecular mass of 23.8 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit 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.
Rose TM & Bruce AG. (1991) Oncostatin M is a member of a cytokine family that includes leukemia-inhibitory factor, granulocyte colony-stimulating factor, and interleukin 6. Proc Natl Acad Sci USA 88(19): 8641–5.
Sims NA & Quinn JMW. (2014) Osteoimmunology: oncostatin M as a pleiotropic regulator of bone formation and resorption in health and disease. Bonekey Rep 3: 527.
Tanaka M & Miyajima A. (2003) Oncostatin M, a multifunctional cytokine. Rev Physiol Biochem Pharmacol 149: 39–52.