

## Recombinant Rat Oncostatin-M

### Information

Gene ID	289747
Accession #	Q65Z15
Alternate Names	
Source	Escherichia coli.
M.Wt	Approximately 24.3 kDa, a single non-glycosylated polypeptide chain containing 214 amino acids.
AA Sequence	KRGCS SSPK LLSQLKSQAN ITGNTASLLE PYILHQNLNT LTLRAACTEH PVAFPSEDML RQLSKPDFLS TVHATLGRVW HQLGAFRQQF PKIQDFPELE RARQNIQGIR NNVYCMARLL HPPLEIPEPT QADSGTSRPT TTAPGIFQIK IDSCRFLWGY HRFMGSVGRV FEEWGDGSRR SRRHSPLWAW LKG DHRIRPS RSSQSAMLRS LVPR
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 2 × PBS, 0.1 % Tween-80.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using murine NIH-3T3 cells is less than 2.0 ng/ml, corresponding to a specific activity of > 5.0 × 10 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	10µg	100µg	500µg
Recombinant Rat Oncostatin-M	10µg	100µg	500µg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

Purity	> 96 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/ $\mu$ g of rRtOSM as determined by LAL method.

## Description

Oncostatin-M (OSM) is a multifunctional cytokine that belongs to the Interleukin-6 subfamily. Among the family members, OSM is most closely related to leukemia inhibitory factor (LIF) and it in fact utilizes the LIF receptor in addition to its specific receptor in the human. A biologically active OSM receptor has been previously described that consists of a heterodimer of leukemia inhibitory factor receptor (LIFR) and gp130. OSM is synthesized by stimulated T-cells and monocytes. Furthermore, the effects of OSM on endothelial cells suggest a pro-inflammatory role for OSM and endothelial cells possess a large number of OSM receptors. Recombinant murine OSM contains 215 amino acids and has a molecular mass of 22.4 kDa. It has approximately 48 % and 72 % amino acid sequence identity with human and murine OSM.

## Reference

1. Tanaka M, Miyajima A. 2003. Rev Physiol Biochem Pharmacol. 149:39-52
2. Mosley B, De Imus C, Friend D, et al. 1996. J Biol Chem. 271:32635-43
3. Malik N, Kallestad JC, Gunderson NL, et al. 1989. Mol Cell Biol. 9:2847-53
4. Brown TJ, Rowe JM, Liu JW, et al. 1991. J Immunol. 147:2175-80.

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