

## Contents

1. Description
  - 1.1 Background information
  - 1.2 Applications
2. References

## 1. Description

**Products** Human Oncostatin M IS, premium grade.  
Recombinant human oncostatin M IS (improved sequence).

Content in µg	Order no.
10	130-114-933
25	130-114-934
100	130-114-936
1000	130-114-937

**Biological activity** The ED<sub>50</sub> is ≤0.05 ng/mL corresponding to an activity of ≥2×10<sup>7</sup> U/mg. For lot-specific activities, please contact our technical support.

▲ **Note:** The ED<sub>50</sub> is determined by proliferation assay using TF-1 cells according to Kitamura *et al.*<sup>1</sup> The proliferation assay was calibrated with the reference reagent for human Oncostatin M (NIBSC code 93/564) provided by the WHO/National Institute for Biological Standards and Control.

**Primary structure** Single, non-glycosylated polypeptide chain (195 amino acid residues) and a proprietary amino acid substitution.

**Molecular mass** 22.0 kDa.

**Source** Produced in *E. coli*.

**Product format** Lyophilized from a filtered (0.2 µm) buffer solution.

**Stabilizer** Mannitol and trehalose.

**Purity** >97% as determined by SDS-PAGE analysis.

**Endotoxin level** Low endotoxin (<0.1 EU/µg cytokine) as determined by Limulus Amebocyte Lysate (LAL) assay.

**Storage** Lyophilized Human Oncostatin M IS, premium grade should be stored at -20 °C. The expiration date is indicated on the vial label. Upon reconstitution aliquots should be stored at -20 °C or below. Avoid repeated freeze-thaw cycles.

**Reconstitution** It is recommended to reconstitute lyophilized Human Oncostatin M IS, premium grade with deionized sterile-filtered water to a final concentration of 0.1–1.0 mg/mL in a minimal volume of 100 µL. Further dilutions should be prepared with 0.1% bovine serum albumin (BSA) or human serum albumin (HSA) in phosphate-buffered saline.

### 1.1 Background information

Oncostatin M, also known as OSM, is a member of the interleukin 6 (IL-6) related cytokine subfamily that includes IL-6, interleukin 11 (IL-11), leukemia inhibitory factor (LIF), and granulocyte colony-stimulating factor (G-CSF). It is a growth and differentiation factor expressed by activated T cells and monocytes that is involved in hematopoiesis, osteogenesis, and neurogenesis. Oncostatin M induces the expression of cytokines like G-CSF and GM-CSF by endothelial cells. It inhibits the growth of a number of tumor cell lines and promotes the growth of human fibroblasts and smooth muscle cells. Human Oncostatin M is active on murine cells.

### 1.2 Applications

Human Oncostatin M IS can be used for a variety of applications including:

- Study of hematopoiesis, osteogenesis, and neurogenesis.
- Expansion of human fibroblasts.

Optimal concentration for a specific application should be determined by a dose-response experiment.

## 2. References

1. Kitamura, T. *et al.* (1989) Establishment and characterization of a unique human cell line that proliferates dependently on GM-CSF, IL-3, or erythropoietin. *J. Cell. Physiol.* 140: 323–334.

Refer to [www.miltenyibiotec.com](http://www.miltenyibiotec.com) for all data sheets and protocols.

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