

OSM Protein, Human (227a.a.)

Cat. No.:	HY-P7052
Synonyms:	rHuOSM; OSM
Species:	Others
Source:	E. coli
Accession:	P13725 (A26-R252)
Gene ID:	5008
Molecular Weight:	Approximately 25.8 kDa

PROPERTIES

AA Sequence	<p> A A I G S C S K E Y R V L L G Q L Q K Q T D L M Q D T S R L L D P Y I R I Q G L D V P K L R E H C R E R P G A F P S E E T L R G L G R R G F L Q T L N A T L G C V L H R L A D L E Q R L P K A Q D L E R S G L N I E D L E K L Q M A R P N I L G L R N N I Y C M A Q L L D N S D T A E P T K A G R G A S Q P P T P T P A S D A F Q R K L E G C R F L H G Y H R F M H S V G R V F S K W G E S P N R S R R H S P H Q A L R K G V R R T R P S R K G K R L M T R G Q L P R </p>
Biological Activity	The ED ₅₀ is <2 ng/mL as measured by human TF-1 cells, corresponding to a specific activity of >5.0 × 10 ⁵ units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in sterile distilled water or aqueous buffer containing 0.1% BSA.
Storage & Stability	Stored at -20°C. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Oncostatin M is a cytokine belonging to the IL-6 family that has multiple functions in hematopoiesis, mesenchymal stem cell differentiation, liver regeneration, heart remodeling, nociception, inflammation and metabolism. The full-length Oncostatin M proteins contain between 239 and 263 amino acids which fold into a long-chain four helix-bundle protein with an up-up-down-down topology representative of all other IL-6 family cytokines. Human Oncostatin-M can bind to either the type I
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receptor complex consisting of gp130 and the LIFR (gp130/LIFRb) or the type II receptor complex consisting of gp130 and the OSMR (gp130/OSMRb). In the murine system Oncostatin-M has been shown to bind with high affinity only to the type II gp130/OSMRb complex^{[1][2]}. Oncostatin-M binds to specific receptor complexes, then activates two major signaling pathways: Janus Kinase-Signal Transducers and Activators of Transcription (JAK-STAT) and Mitogen-Activated Protein Kinase (MAPK), to regulate downstream events^[3].

REFERENCES

- [1]. Hermans HM, et al. Oncostatin M and interleukin-31: Cytokines, receptors, signal transduction and physiology. *Cytokine Growth Factor Rev.* 2015 Oct;26(5):545-58.
- [2]. Gómez-Lechón MJ, et al. Oncostatin M: signal transduction and biological activity. *Life Sci.* 1999;65(20):2019-30.
- [3]. Chen SH, et al. Oncostatin M: a pleiotropic cytokine in the central nervous system. *Cytokine Growth Factor Rev.* 2004 Oct;15(5):379-91.
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Caution: Product has not been fully validated for medical applications. For research use only.

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