Data Sheet (Cat.No.TMPY-02627)

TargetMol

Oncostatin M/OSM Protein, Mouse, Recombinant (His)

General Information

Synonyms:	OncoM;oncostatin M
Protein Construction:	A DNA sequence encoding the mature form of mouse OSM (P53347) (Met 1-Arg 206) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Asn 25
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P53347
Molecular Weight:	22 kDa (predicted); 35-40 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Oncostatin M (OSM) is a glycoprotein belonging to the interleukin-6 family of cytokines that has functions mainly in cell growth. Oncostatin M (OSM) is considered as a pleiotropic cytokine that signals through cell surface receptors type I and type II both of which share the similarity of containing protein gp130 and takes part in many bio metabolism processes including liver development, hematopoiesis, inflammation, bone formation, and destruction and possibly CNS development. Oncostatin M (OSM) was previously identified by its ability to inhibit

the growth of cells from melanoma and other solid tumors. It also has been reported that OSM, like LIF, IL-6, and G-CSF, can inhibit the proliferation of murine M1 myeloid leukemic cells and can induce their differentiation into macrophage-like cells. The human form of OSM is insensitive between pH2 and 11 and resistant to heating for one hour at 56 degrees but is not stable at 90 degrees. The human OSM is produced as a precursor containing 252 amino acids, whose first 25 amino acids function as a secretory signal peptide and which on removal yields the soluble 227 amino acid pro-OSM. Removal of the C-terminal most 31 amino acids produces the fully active 196 residue form.

Reference

Tanaka M,et al. (2003) Oncostatin M, a multifunctional cytokine. Rev Physiol Biochem Pharmacol. Reviews of Physiology, Biochemistry and Pharmacology. 149: 39-52.
Auguste P,et al. (1997) Signaling of type II oncostatin M receptor. J Biol Chem. 272 (25): 15760-4.
Zarling JM,et al. (1986). Oncostatin M: a growth regulator produced by differentiated histiocytic lymphoma cells. Proc Natl Acad Sci. 83 (24): 9739-43.