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OSM

Catalog # PVGS1662

Product Information

Primary Accession	Q65Z15
Species	Rat
Sequence	Lys26-Arg239
Purity	> 96% as analyzed by SDS-PAGE > 96% as analyzed by HPLC
Endotoxin Level	
Biological Activity	The ED_{50} 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 5.0×10^5 IU/mg.
Expression System	E. coli
Theoretical Molecular Weight	24.3 kDa
Formulation	Lyophilized from a 0.2 μm filtered solution in 2 × PBS, 0.1 % Tween-80.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at -20°C or -70°C. Upon reconstitution, the product should be stable for up to 1 week at 2-8°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	289747
Other Names	Oncostatin-M, OSM, Osm
Target Background	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.

Protein Information

Name	Osm {ECO:0000312|RGD:1585012}
Function	Functions as a cytokine that uses both type I OSM receptor (heterodimers composed of LIFR and IL6ST) and type II OSM receptor (heterodimers composed of OSMR and IL6ST) (By similarity). Functionally, regulates many processes including cell proliferation, cell differentiation, cytokine production (PubMed:15743783). Mechanistically, low affinity ligand binding to IL6ST/gp130, induces heterodimerization with LIFR or OSMR, activating JAK tyrosine kinases (JAK1 or JAK2 and to a lesser extent TYK2) bound to their intracellular domains. These kinases subsequently phosphorylate IL6ST/gp130 and LIFR or OSMR. The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of STAT3. The type II OSM complex receptor is also able in addition to STAT3 to recruit STAT5B. Moreover, the type II OSM complex receptor recruits SHC1 through OSMR in a JAK1 mediated phosphotyrosine-dependent manner, leading to SHC1 association with GRB2 and downstream activation of the Ras/Raf/MAPK pathway (By similarity).
Cellular Location	Secreted {ECO:0000250|UniProtKB:P13725}.
Tissue Location	Widely expressed. Expressed at higher levels in liver, skin and spleen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.