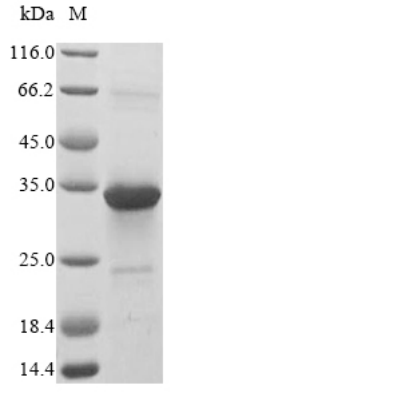
Recombinant Rat Oncostatin-M (Osm)

Product Code	CSB-EP723970RAb0
Abbreviation	Recombinant Rat Osm protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q65Z15
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Rattus norvegicus (Rat)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	KRGCSSSSPKLLSQLKSQANITGNTASLLEPYILHQNLNTLTLRAACTEHPVAF PSEDMLRQLSKPDFLSTVHATLGRVWHQLGAFRQQFPKIQDFPELERARQNI QGIRNNVYCMARLLHPPLEIPEPTQADSGTSRPTTTAPGIFQIKIDSCRFLWGY HRFMGSVGRVFEEWGDGSRRSRR
Research Area	Immunology
Source	E.coli
Target Names	Osm
Expression Region	26-208aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged
Mol. Weight	26.2 kDa
Protein Length	Full Length of Mature Protein
Image	 (Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.
Description	Recombinant Rat Oncostatin-M (Osm) gets expressed in E. coli and includes

the complete mature protein sequence, covering amino acids 26 to 208. The product comes with an N-terminal 10xHis-tag, which makes purification and detection more straightforward. SDS-PAGE analysis confirms the purity reaches above 85%, suggesting it should work reliably in research settings. Keep in mind this recombinant protein is strictly for research purposes—it's not appropriate for clinical or diagnostic use.

Oncostatin-M (Osm) belongs to the interleukin-6 cytokine family. This protein appears to play a significant role in controlling inflammation and how cells differentiate. Researchers often examine Osm because of its involvement in cell signaling pathways, especially those that influence immune responses and hematopoiesis. Its regulatory functions have made it a key target in studies looking at cellular growth and development.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Antibody Development and Validation Studies

This recombinant rat Oncostatin-M protein works well as an immunogen for creating polyclonal or monoclonal antibodies that target rat OSM specifically. The N-terminal 10xHis tag makes purification simple and allows for easy immobilization during antibody screening assays. Since purity exceeds 85%, the protein quality appears sufficient for immunization protocols and follow-up antibody characterization work. Because it contains the full-length mature protein sequence, any antibodies developed should recognize native epitopes found in endogenous rat OSM.

2. Protein-Protein Interaction Studies

Researchers can use this His-tagged recombinant protein in pull-down assays to find and characterize OSM binding partners within rat cell lysates or tissue extracts. The 10xHis tag allows for immobilization on nickel-affinity matrices, making it possible to systematically screen for proteins that might interact with OSM. Such studies may help clarify OSM signaling pathways and receptor interactions in rat models. The purified protein also serves as a useful control in competitive binding experiments when validating specific interactions.

3. ELISA Development and Optimization

The recombinant rat OSM protein can function as either a standard or coating antigen when developing enzyme-linked immunosorbent assays to detect OSM in rat biological samples. Its His tag allows for oriented immobilization on nickel-coated plates, which could improve both assay sensitivity and reproducibility. Given its defined concentration and purity level, the protein offers a dependable reference standard for quantitative measurements. This application supports

preclinical research that requires OSM quantification in rat serum, plasma, or tissue homogenates.

4. Biochemical Characterization and Stability Studies

The purified recombinant protein proves useful for investigating rat OSM's biochemical properties, including thermal stability, pH sensitivity, and optimal storage conditions. SDS-PAGE analysis can verify protein integrity under different experimental conditions. The protein may serve as a substrate for studying post-translational modifications or proteolytic processing that's relevant to OSM biology. These characterization studies provide essential baseline data for designing functional experiments and understanding how OSM protein behaves in laboratory conditions.

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