APA110Mu01 100μg
Active Oncostatin M (OSM)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Asn25~Leu115
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 7.1
Predicted Molecular Mass: 11.6kDa
Accurate Molecular Mass: 13kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

NRGCSN SSSQLLSQLQ NQANLTGNTE SLLEPYIRLQ NLNTPDLRAA CTQHSVAFPS EDTLRQLSKP HFLSTVYTTL DRVLYQLDAL RQKFL

[ACTIVITY]

Oncostatin M (OSM), encoded by the OSM gene, is a pleiotropic cytokine belonging to the interleukin-6 (IL-6) family. Initially identified for its anti-tumor activity, it is primarily secreted by activated T cells, macrophages, and dendritic cells. OSM plays pivotal roles in regulating cell growth, differentiation, inflammation, and tissue remodeling, with implications in immune responses, embryonic development, and pathological processes like fibrosis and autoimmune diseases. Its biological effects are mediated through binding to specific receptor complexes on target cell surfaces. OSM and LIF (Leukemia Inhibitory Factor) share structural homology and can bind to the common gp130 receptor subunit, enabling functional crosstalk in cellular signaling.Thus a functional ELISA assay was conducted to detect the interaction of recombinant mouse OSM and recombinant rat LIF.

Briefly, OSM was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to LIF-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-OSM pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm

immediately. The binding activity of recombinant mouse OSM and recombinant rat LIF was shown in Figure 1, the EC50 for this effect is 0.322μg/mL.

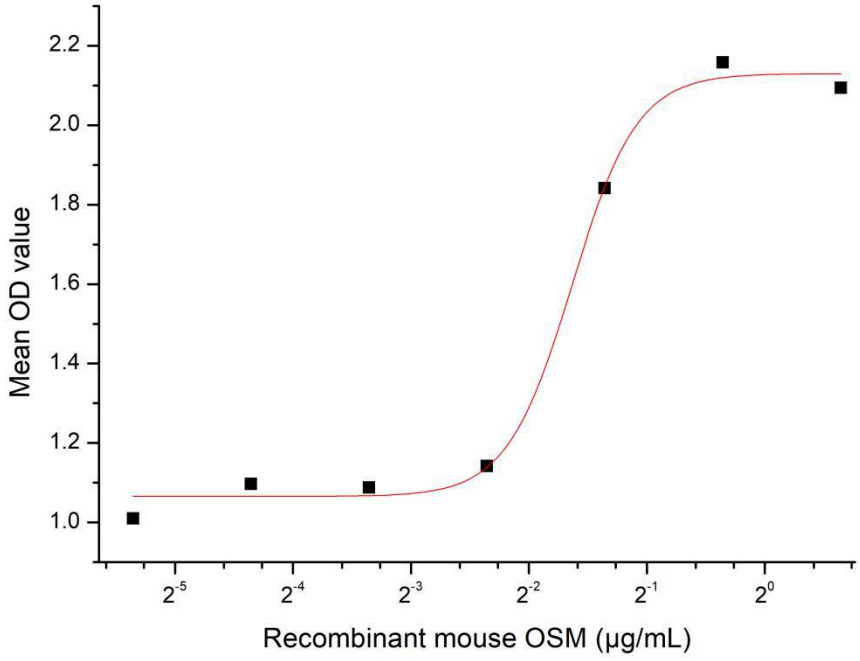

Figure 1. The binding activity of recombinant OSM and human LIF

[IDENTIFICATION]

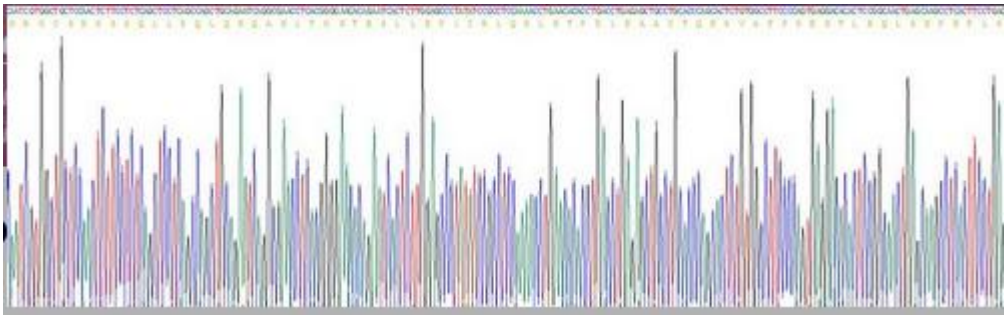

Figure 2. Gene Sequencing (extract)

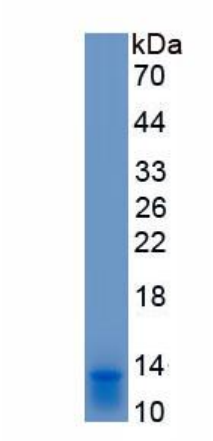

Figure 3. SDS-PAGE

Sample: Active recombinant OSM, Mouse

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.