

APA061Mu01 100µg

Active Interleukin 15 (IL15)

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: Asn49~Ser162

Tags: N-terminal His-tag

Purity: >80%

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: 5.2

Predicted Molecular Mass: 14.5kDa

Accurate Molecular Mass: 14/16/17kDa 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 2-8°C for one month.

Aliquot and store at -80°C 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 37°C 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]

NW

IDVRYDLEKI ESLIQSIHID TTLYTDSDFH PSCKVTAMNC FLLELQVILH
EYSNMTLNET VRNVLYLANS TLSSNKNVAE SGCKECEEE EKTFTFLQS
FIRIVQMFIN TS

[ACTIVITY]

Interleukin 15 (IL15), encoded by the IL15 gene in humans, is a pleiotropic cytokine of the common gamma-chain family. It plays critical roles in immune regulation, especially in maintaining the survival, proliferation, and activation of T cells, natural killer (NK) cells, and dendritic cells. Produced mainly by monocytes, macrophages, and epithelial cells, IL15 exerts its biological effects via a unique "trans-presentation" mechanism, often relying on binding to its receptor. IL15 is linked to immune responses against infections and tumors, and its dysregulation is associated with autoimmune diseases and inflammatory disorders. IL15 binds specifically to Interleukin 15 Receptor alpha (IL15Ra, encoded by IL15RA), forming a complex to initiate downstream signaling. Thus a functional ELISA assay was conducted to detect the interaction of recombinant musculus IL15 and recombinant human IL15Ra. Briefly, IL15 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100µl were then transferred to IL15Ra-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-IL15 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 µL stop solution to the wells and

read at 450/630nm immediately. The binding activity of recombinant musculus IL15 and recombinant human IL15Ra was shown in Figure 1, the EC₅₀ for this effect is 0.21561 µg/mL.

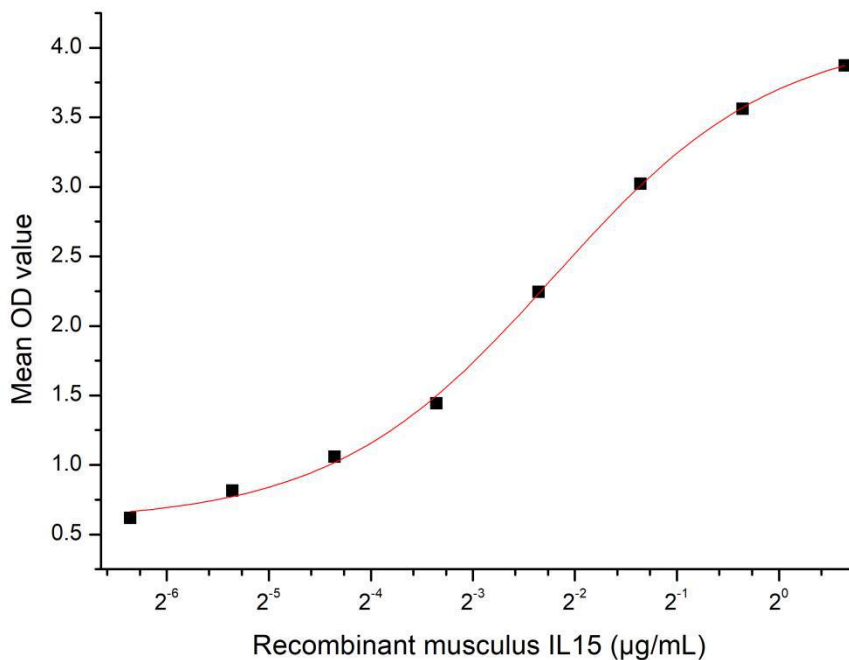


Figure 1. The binding activity of recombinant IL15 and human IL15Ra

[IDENTIFICATION]

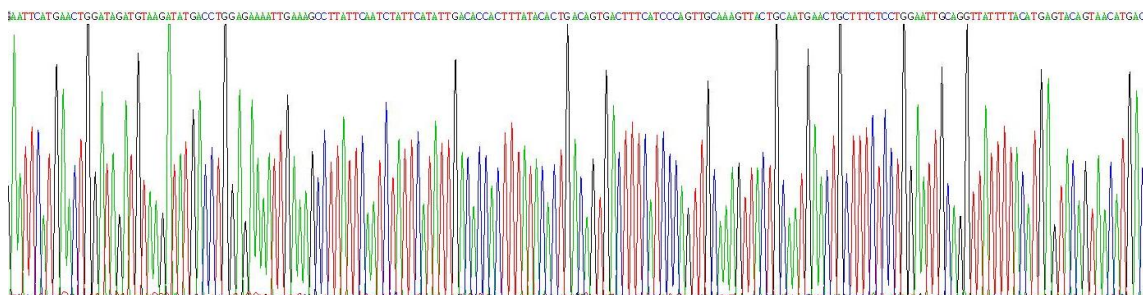


Figure 2. Gene Sequencing (extract)

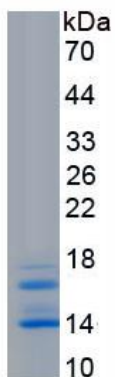


Figure 3. SDS-PAGE

Sample: Active recombinant IL15, 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.