

APX262Mu62 100µg

Active Interleukin 23 (IL23)

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: Eukaryotic expression.

Host: 293F cell

Residues: Met23~Ser335+IGSGSSRGGSGSGSGGGGSK+Leu20~Ala196

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 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: 6.5

Predicted Molecular Mass: 58.8kDa

Accurate Molecular Mass: 75kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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]

MWELEKDVYVVEVDWTPDAPGETVNLCTDTPEDDITWTSDQRHGVIGSGKTLTITVKEFLD
AGQYTCHKGGETLSHSHLLHHKKENGIWSTEILKNFKNKTFLKCEAPNYSGRFTCSWLVRNM
DLKFNIKSSSSPDSRAVTCGMASLSAEKVTLDQRDYEKYSVSCQEDVTCPTAEETLPIELALEAR
QQNKYENYSTSFIRDIIKPDPPKNLQMKPLKNSQVEVSWEYPDSWSTPHSYFSLKFFVRIQRKK
EKMKETEEGCNQKGAFLVEKTSTEVQCKGGNVVCVQAQDRYNNSSCSKWACVPCRVR
IGSGSSRGGSGSGGGGGGSK
LAVPRSSPDWAQCQQLSRNLCMLAWNAHAPAGHMNLLREEEDEETKNNVPRIQCEDGCD
PQGLKDNSQFCLQRIRQGLAFYKHLLDSDIFKGEPALLPDSPMEQLHTSLLGLSQLLPEDHPR
ETQQMPSSLSSSQWQRPLLRSLKILRSLQAFLAIAARVFAHGAATLTEPLVPTA

[ACTIVITY]

Interleukin-23 (IL-23) is a heterodimeric pro-inflammatory cytokine composed of two subunits: p19 (unique to IL-23) and p40 (shared with IL-12). Primarily produced by activated dendritic cells, macrophages, and other antigen-presenting cells, IL-23 plays a pivotal role in immune responses, particularly in promoting the differentiation and maintenance of T helper 17 (Th17) cells. Th17 cells secrete IL-17, IL-22, and other inflammatory mediators, which are crucial for host defense against extracellular pathogens but also contribute to autoimmune and chronic

inflammatory diseases, such as psoriasis, inflammatory bowel disease (IBD), and rheumatoid arthritis. Besides, Janus Kinase 2 (JAK2) has been identified as an interactor of IL-23, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse IL-23 and recombinant rat JAK2. Briefly, IL-23 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to JAK2-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-IL-23 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 μ L stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant mouse IL-23 and recombinant rat JAK2 was shown in Figure 1, the EC₅₀ for this effect is 0.157 μ g/mL.

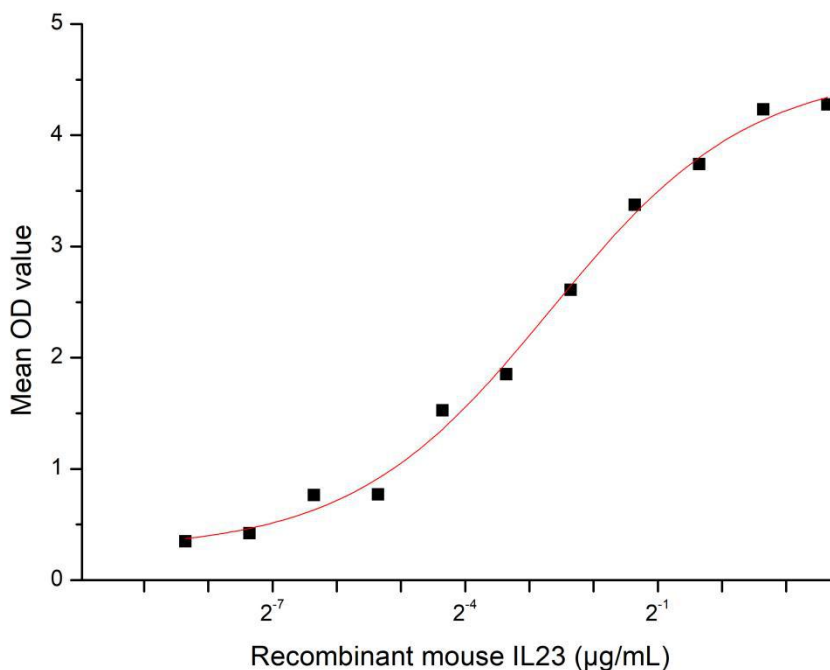


Figure 1. The binding activity of recombinant mouse IL-23 and recombinant rat JAK2

[IDENTIFICATION]

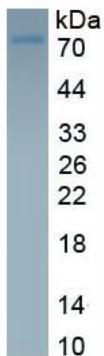


Figure 2. SDS-PAGE

Sample: Active recombinant IL23, 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.