APA076Ra61 100μg
Active Interleukin 3 (IL3)
Organism Species: *Rattus norvegicus (Rat)*
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: Ile27~Cys166
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.0
Predicted Molecular Mass: 17.4kDa
Accurate Molecular Mass: 22&24-30kDa 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]

ISDR GSDAHHLLRT LDCRTIALEI
LVKLPVSGLN NSDDKANLRN STLRRVNLDE FLKSQEEFDS QDTTDIKSKL
QKLKCCIPAA ASDSVLPGVY NKDLDDFKKK LRFYVIHLKD LQPVSVSRPP
QPTSSSDNFR PMTVEC

[ACTIVITY]

Interleukin 3 is an interleukin, a type of biological signal that can improve the body's natural response to disease as part of the immune system. It acts by binding to the interleukin 3 receptor. IL-3 synergizes with other cytokines to stimulate the growth of immature progenitor cells of all lineages, and is therefore a multi-lineage colony-stimulating factor (CSF). It prevents cell death and promotes the survival of macrophages, mast cells, and megakaryocytes. IL-3 can also support the growth and survival of myeloid progenitor cells through the activation of Janus Kinase 2 (JAK2) tyrosine kinase, and macrophage differentiation has been shown to be regulated by protein kinase C (PKC). Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat IL-3 and recombinant rat JAK2. Briefly, IL-3 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to JAK2-coated

microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-IL-3 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, 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 nm immediately. The binding activity of IL-3 and JAK2 was shown in Figure 1, and this effect was in a dose dependent manner.

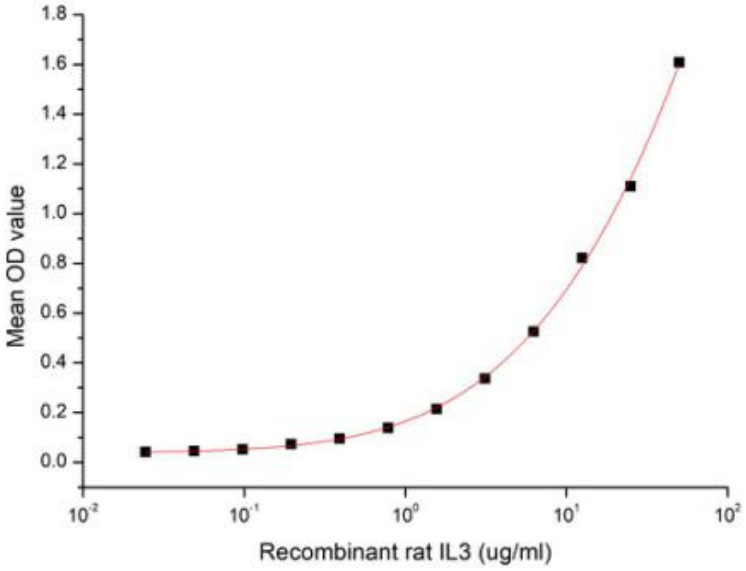

Figure 1. The binding activity of recombinant rat IL-3 and recombinant rat JAK2

[IDENTIFICATION]

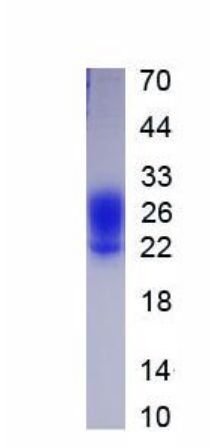

Figure 2. SDS-PAGE

Sample: Active recombinant IL3, Rat

[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.