

**APA076Mu62 100µg**  
**Active Interleukin 3 (IL3)**

**Organism Species: *Mus musculus (Mouse)***  
***Instruction manual***

FOR RESEARCH USE ONLY  
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Eukaryotic expression.

**Host:** 293F cell

**Residues:** Ala27~Cys166

**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:** Cell culture; Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 8.3

**Predicted Molecular Mass:** 17.3kDa

**Accurate Molecular Mass:** 25-40kDa 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.

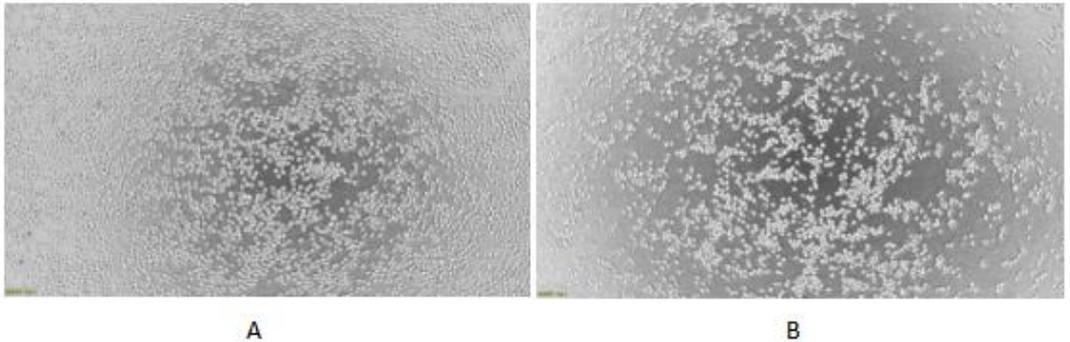
## [ SEQUENCE ]

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ASISGRDTHRLTRTLNCSSIVKEIIGKLPPEPELKTDDGPSLRNKSFRRVNLSKFVESQGEVDPEDRYV  
IKSNLQKLNCLPTSANDSALPGVFI RDLDDFRKKLRFYMVHLNDLETVLT SRPPQPASGSVSPNRGTV  
EC
```

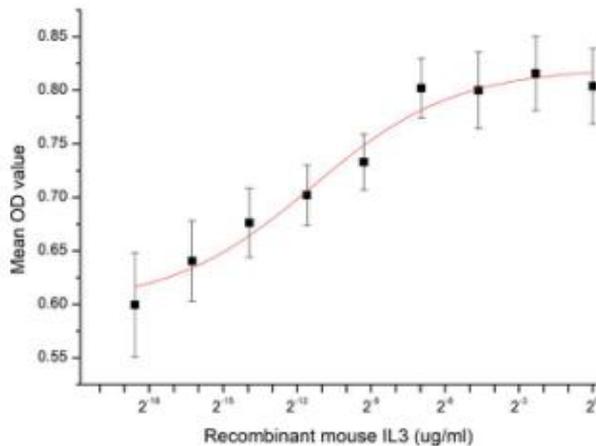
## [ ACTIVITY ]

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. To test the effect of IL-3 on cell proliferation, M-NFS-60 cells were seeded into triplicate wells of 96-well plates at a density of 8000 cells/well with 2% serum standard 1640 which contains various concentrations of recombinant mouse IL-3. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 µl of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured

using a microplate reader after incubating the plate for 2-4 hours at 37 °C . Proliferation of M-NFS-60 cells after incubation with IL-3 for 72h observed by inverted microscope was shown in Figure1. Cell viability was assessed by CCK-8(Cell Counting Kit-8 ) assay after incubation with recombinant IL-3 for 72h. The result was shown in Figure2. It was obvious that IL-3 significantly increased cell viability of M-NFS-60 cells. The ED50 is 0.37ng/ml.

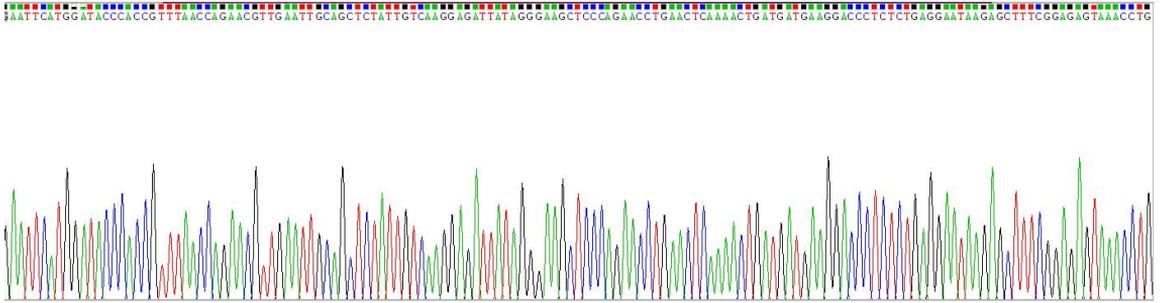


**Figure 1. Cell proliferation of M-NFS-60 cells after stimulated with IL-3 .**  
(A) M-NFS-60 cells cultured in RPMI-1640, stimulated with 0.2ug/ml IL-3 for 72h;  
(B) Unstimulated M-NFS-60 cells cultured in RPMI-1640 for 72h.

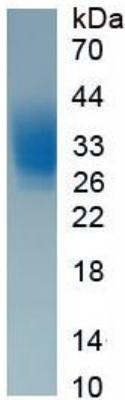


**Figure 2. The dose-effect curve of IL-3 on M-NFS-60 cells**

## [ IDENTIFICATION ]



**Figure 3. Gene Sequencing (extract)**



**Figure 4. SDS-PAGE**

**Sample: Active recombinant IL3, 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.