

APC028Bo61 100µg

Active Interleukin 28B (IL28B)

Organism Species: *Bos taurus*; Bovine (Cattle)

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: Arg24-Val199

Tags: C-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: 8.8

Predicted Molecular Mass: 20.5kDa

Accurate Molecular Mass: 28kDa 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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RTGAVPVPSAPRALPPARGCHVAQFKSLSPQELQAFKTARDAFEDSFLPKDWDCSTHLFPRT  
DLKHLQVWERPVALEAELALTITVLEAMANSLSLGHSLQPLLTQNIHSLQACVPAQPTASSR  
PRGRLHHWLHRLQEARKESQDCLKASVMFNLLRLTRDLKCVASGDQCV
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[ACTIVITY]

Interleukin- 28B (IL28B), also designated IFN- λ 3, belongs to class- II cytokine superfamily and exerts antiviral, antitumor and immunomodulatory bioactivities. It primarily binds IFNLR1 with high affinity and subsequently recruits IL10RB to assemble a functional heterodimeric receptor complex via protein - protein interaction. This binding event triggers downstream JAK - STAT signaling cascades, inducing interferon- stimulated genes and mediating mucosal immune defense against invading pathogens.

Thus a functional ELISA assay was conducted to detect the interaction of recombinant IL28B and recombinant IFNLR1. Briefly, IL28B was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ L were then transferred to IFNLR1-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-IL28B 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 IL28B and recombinant IFNLR1 was shown in Figure 1, the EC50 for this effect is 0.132µg/mL.

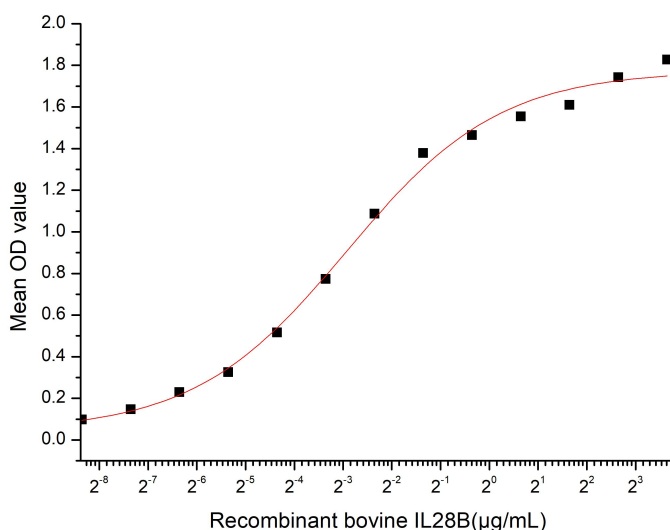


Figure 1. The binding activity of recombinant IL28B and IFNLR1

[IDENTIFICATION]

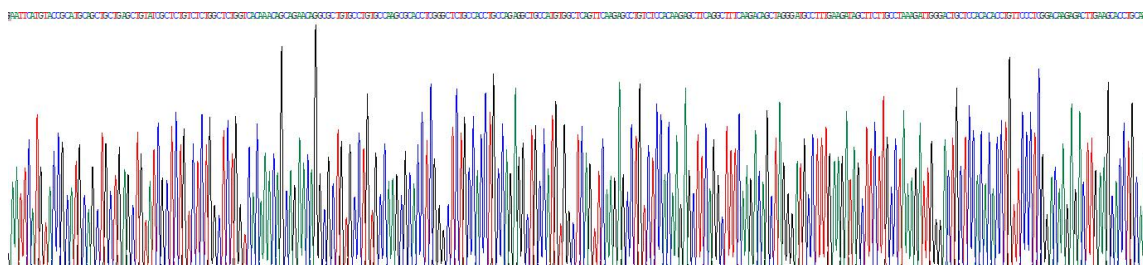


Figure 2. Gene Sequencing (extract)

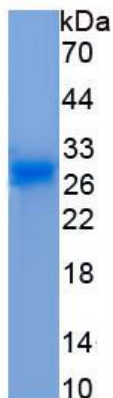


Figure 3. SDS-PAGE

Sample: Active recombinant IL28B, Cattle

[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.