

APC029Hu01 100µg

Active Interleukin 29 (IL29)

Organism Species: *Homo sapiens* (Human)

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Gly20~Thr200

Tags: N-terminal His-tag

Purity: >90%

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

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 9.3

Predicted Molecular Mass: 23.7kDa

Accurate Molecular Mass: 27kDa 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 20mM Tris, 150mM NaCl (pH8.0) 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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          G PVPTSKPTTT GKGCHIGRFK SLSPQELASF  
KKARDALEES LKLKNWSCSS PVFPGNWDLR LLQVRERPVA LEAELALTLK  
VLEAAAGPAL EDVLDQPLHT LHHILSQLQA CIQPQPTAGP RPRGRLHHWL  
HRLQEAPKKE SAGCLEASVT FNLFRLLTRD LKYVADGNLC LRTSTHPEST
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[ACTIVITY]

Interleukin-29 (IL-29) is a member of the helical cytokine family and is a type III interferon. It is also known as IFN λ 1 and is highly similar in amino acid sequence to the IL-28, the other type III interferon. IL-29 plays an important role in host defenses against microbes and its gene is highly upregulated in cells infected with viruses. Besides, ATPase, Ca⁺⁺ Transporting, Plasma Membrane 2 (ATP2B2) has been identified as an interactor of IL29, thus a binding ELISA assay was conducted to detect the interaction of recombinant human IL29 and recombinant human ATP2B2. Briefly, IL29 were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ L were then transferred to ATP2B2-coated microtiter

wells and incubated for 2h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-IL29 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of IL29 and ATP2B2 was shown in Figure 1, and this effect was in a dose dependent manner.

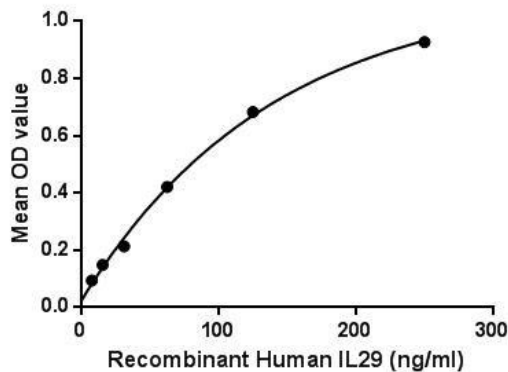


Figure 1. The binding activity of IL29 with ATP2B2.

[IDENTIFICATION]

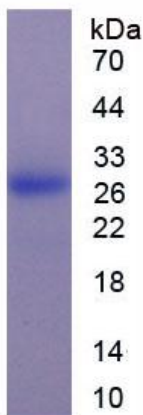


Figure 2. SDS-PAGE

Sample: Active recombinant IL29, Human

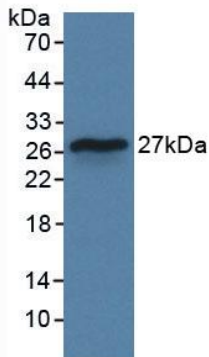


Figure 3. Western Blot

Sample: Recombinant IL29, Human;

Antibody: Rabbit Anti-Human IL29 Ab (PAC029Hu01)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.