**APC029Hu01 100μg**
**Active Interleukin 29 (IL29)**
**Organism Species: *Homo sapiens* (Human)**
***Instruction manual***

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1th 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 2-8ºC for one month.

Aliquot and store at -80ºC 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 37ºC 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 ]

G PVPTSKPTTT GKGCHIGRFK SLSPQELASF
KKARDALEES LKLKNWSCSS PVFPGNWDLR LLQVRERPVA LEAELALTLK
VLEAAAGPAL EDVLDQPLHT LHHILSQLQA CIQPQPTAGP RPRGRLHHWL
HRLQEAPKKE SAGCLEASVT FNLFRLLTRD LKYVADGNLC LRTSTHPEST

## [ ACTIVITY ]

Interleukin-29 (IL-29) is a member of the helical cytokine family and is a type III interferon. It is also known as IFNλ1 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 100μL were then transferred to ATP2B2-coated microtiter

wells and incubated for 2h at 37 ℃. 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℃. 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.

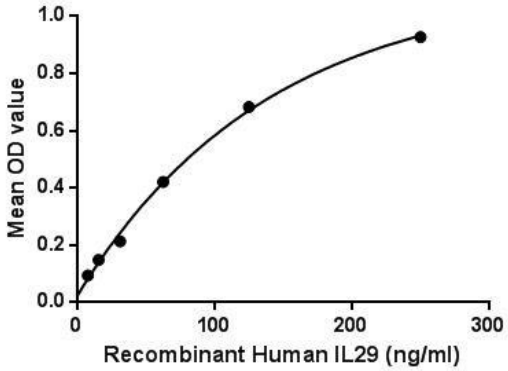


**Figure 1. The binding activity of IL29 with ATP2B2.**

## [ IDENTIFICATION ]

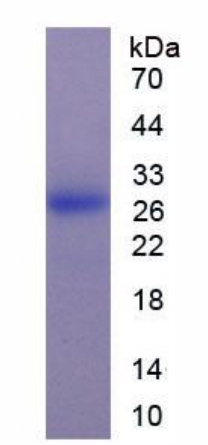


**Figure 2. SDS-PAGE**

**Sample: Active recombinant IL29, Human**

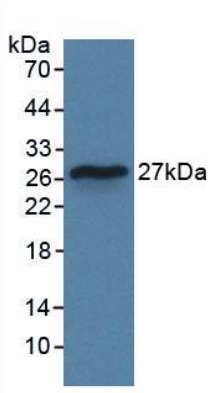


**Figure 3. Western Blot**

**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.