

APA257Hu61 100µg
Active Procollagen II N-Terminal Propeptide (PIINP)
Organism Species: *Homo sapiens (Human)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: Gln26~Ala181

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.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 4.2

Predicted Molecular Mass: 17.3kDa

Accurate Molecular Mass: 25kDa 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 (pH7.6) 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]

QDVQEAGSCVQDQORYNDKDVVKPEPCRICVCDTGTVLCDIIICEDVKDCLSP EIPFGECCPICPTDLATASGQPGKGGKGE PGDIKD
IVGPGKPPGPGQPAGEQGPRGDRGDKGEKGAPGPRGRDGEPGTPGNPGPPGPPGPPGLGGNFAA

[ACTIVITY]

Procollagen II N-Terminal Propeptide is specific for cartilaginous tissues. It is essential for the normal embryonic development of the skeleton, for linear growth and for the ability of cartilage to resist compressive forces, which are associated with achondrogenesis, chondrodysplasia, early onset familial osteoarthritis, Langer-Saldino achondrogenesis, SED congenita, Kniest dysplasia, Stickler syndrome type I, and spondyloepimetaphyseal dysplasia Strudwick type. A binding ELISA assay was conducted to detect the association of PIINP with ITGb1. Briefly, ITGb1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul ITGb1 were then transferred to PIINP-coated microtiter wells (2ug/ml, 100ul/well) and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-ITGb1 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 °C. Finally, add 50 uL stop solution to the wells and read at 450nm immediately. The binding activity of PIINP with ITGb1 was shown in Figure 1, and this effect was in a dose dependent manner, the EC50 was approximately 2.82 ug/mL.

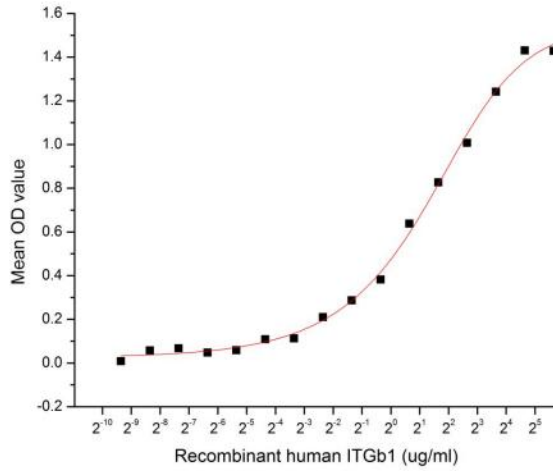


Figure 1. The binding activity of PIINP with ITGb1

[IDENTIFICATION]

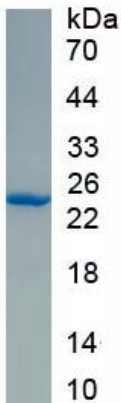


Figure 2. SDS-PAGE

Sample: Active recombinant PIINP, Human

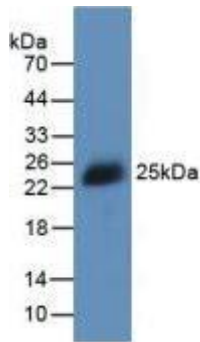


Figure 3. Western Blot

Sample: Recombinant PIINP, Human;

Antibody: Rabbit Anti-human PIINP Ab (PAA257Hu06)

[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.