APA957Ra01 100μg
Active Procollagen I N-Terminal Propeptide (PINP)
Organism Species: *Rattus norvegicus (Rat)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Gln23~Ser151
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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: 4.3
Predicted Molecular Mass: 16.7kDa
Accurate Molecular Mass: 17kDa as determined by SDS-PAGE reducing conditions.

[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 2-8ºC 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]

QEDIPEVSCIHNGLRVPNGETWKPDVCLICICHNGTAVCDGVLCKEDLDCPNPQKREGECCPFCPEEYVSPDAEVIGVEGPKGDPGPQ
GPRGPVGPPGQDGIPGQPGLPGPPGPPGPPGPPGLGGNFAS

[ACTIVITY]

Procollagen I 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 was 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 functional binding ELISA assay was conducted to detect the interaction of recombinant rat PINP with recombinant human COL5a2. Briefly, biotin-linked PINP were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to COL5a2-coated microtiter wells and incubated for 1h at 37 ℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30 min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 ℃. Finally, add 50 μl stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant rat PINP with recombinant human COL5a2 was shown in Figure 1, the EC50 for this effect is 9.18 ug/mL.

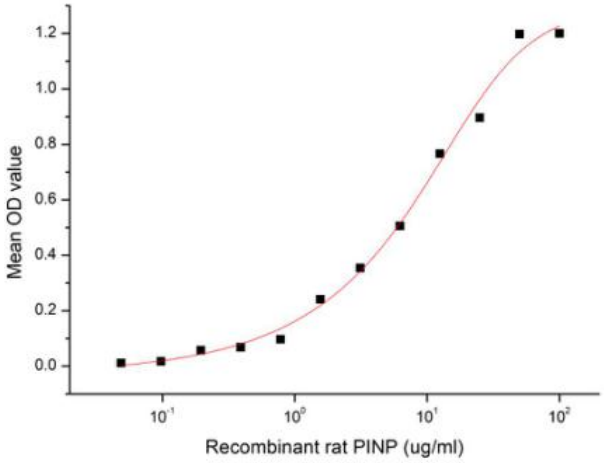

Figure 1. The binding activity of recombinant rat PINP with recombinant human COL5a2

[IDENTIFICATION]

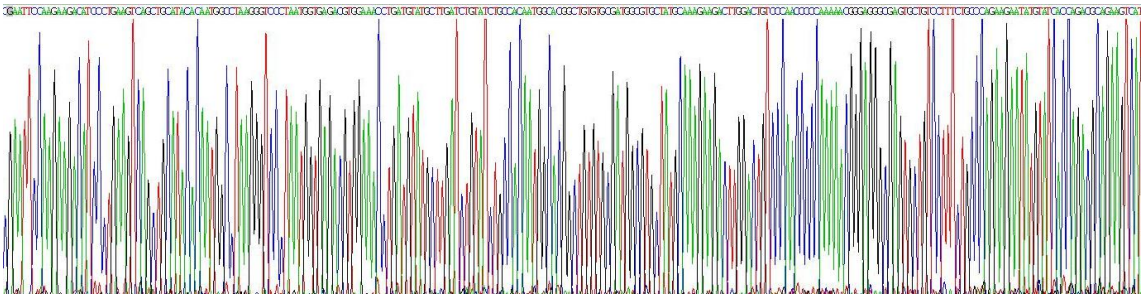

Figure 2. Gene Sequencing (extract)

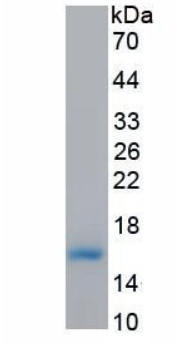

Figure 3. SDS-PAGE

Sample: Active recombinant PINP, Rat

[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.