

Procollagen I N-Terminal Propeptide (PINP) Active Protein | PINP active protein

Active Procollagen I N-Terminal Propeptide (PINP)

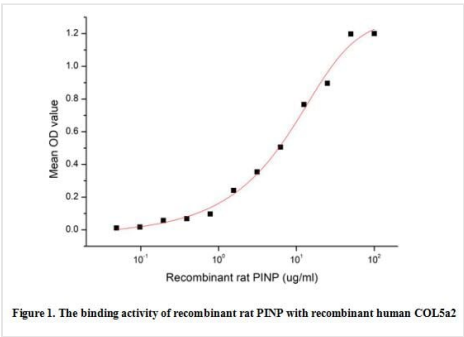
CATALOG # AAA161809	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Procollagen I N-Terminal Propeptide (PINP); Active Procollagen I N-Terminal Propeptide (PINP); Procollagen I N-Terminal Propeptide; P1NP; N-Propeptide Of Type I Procollagen; Procollagen I Amino Terminal Propeptide4; PINP active protein

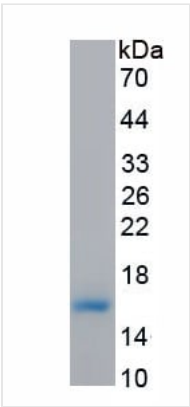
PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Gln23~Ser1 51
Applicable Applications for PINP active protein	Activity Assay, Cell Culture
Species	Rat
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	4.3
Research Area	Metabolic pathway, Hepatology, Bone metabolism
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



Bioactivity

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 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 degree C. 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 degree C. Finally, add 50 ul 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.



SDS-PAGE
Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for PINP active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	158711704
NCBI GeneID	29393
NCBI Accession #	NP_445756.1
NCBI GenBank Nucleotide #	NM_053304.1
UniProt Accession #	P02454; P02455; Q63079; A3KNA1
Molecular Weight	137,953 Da
NCBI Official Full Name	collagen alpha-1(I) chain
NCBI Official Synonym Full Names	collagen, type I, alpha 1
NCBI Official Symbol	Col1a1
NCBI Official Synonym Symbols	COLIA1
NCBI Protein Information	collagen alpha-1(I) chain
UniProt Protein Name	Collagen alpha-1(I) chain
UniProt Gene Name	Col1a1
UniProt Entry Name	CO1A1_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

