

Active Parathyroid Mouse Hormone Related Protein (PTHrP)

Catalog # IC8819

FOR IN VITRO USE AND RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ala37~His175

Tags: N-terminal His-tag

Purity: >95%

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: 10.1

Predicted Molecular Mass: 17.4kDa

Accurate Molecular Mass: 18&19kDa 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 affect 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.



Figure 3. SDS-PAGE

Sample: Active recombinant PTHrP, Mouse



[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]

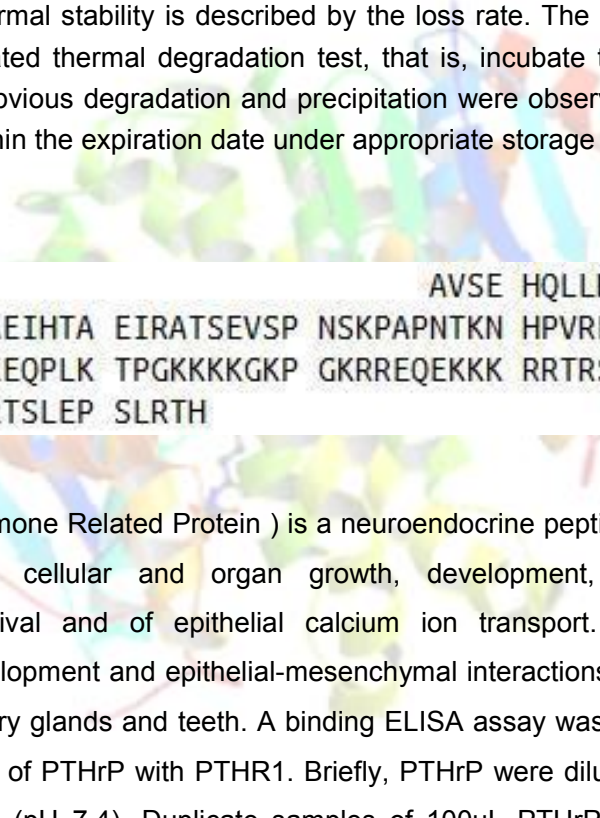
Storage: Avoid repeated freeze/thaw cycles.

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]

A 3D ribbon diagram of a protein structure, showing various loops and helices in different colors (blue, green, yellow, red).

AVSE HQLLHDKGKS
IQDLRRRFFL HHLIAEIHTA EIRATSEVSP NSKPAPNTKN HPVRFGSDDE
GRYLTQETNK VETYKEQPLK TPGKKKKGKP GKRREQEKKK RRTRSAWPST
AASGLLEDPL PHTSRTSLEP SLRTH

[ACTIVITY]

PTHrP (Parathyroid Hormone Related Protein) is a neuroendocrine peptide which is a critical regulator of cellular and organ growth, development, migration, differentiation and survival and of epithelial calcium ion transport. Regulates endochondral bone development and epithelial-mesenchymal interactions during the formation of the mammary glands and teeth. A binding ELISA assay was conducted to detect the association of PTHrP with PTHR1. Briefly, PTHrP were diluted serially in PBS, with 0.01%BSA (pH 7.4). Duplicate samples of 100uL PTHrP were then transferred to PTHR1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-PTHrP

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 PTHrP and PTHR1 was shown in Figure 1, and this effect was in a dose dependent manner.

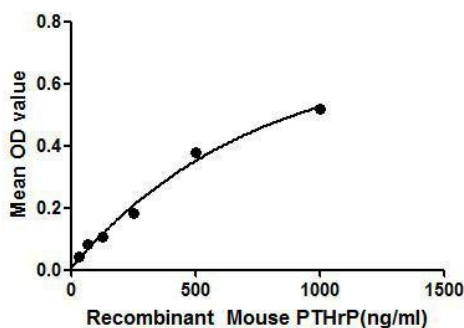


Figure 1. The binding activity of PTHrP with PTHR1.

[IDENTIFICATION]

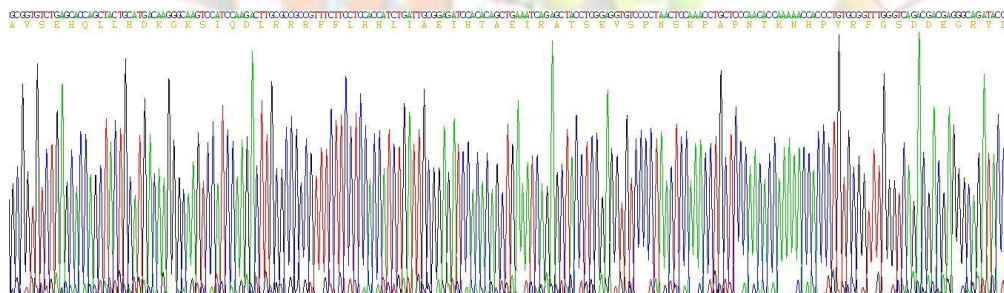


Figure 2. Gene Sequencing (extract)



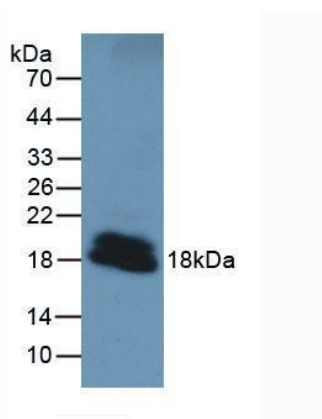


Figure 4. Western Blot

**Sample: Recombinant PTHrP, Mouse;
Antibody: Rabbit Anti-Mouse PTHrP Ab**

[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.

