

APA485Hu61 100µg
Active N-Terminal Pro-Brain Natriuretic Peptide (NT-ProBNP)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.

Host: 293F cell

Residues: His27~Arg102

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 .

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: 9.2

Predicted Molecular Mass: 10.1kDa

Accurate Molecular Mass: 20kDa 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 (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°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]

HPLGSPGSASDLETSGLQEQRNHLQKLSLQVEQTSLEPLQESPRPTGWVKSREVATEGIRGHRKMLVLYT
LRAPR

[ACTIVITY]

Terminal pro-brain natriuretic peptide (NT-proBNP) is a prohormone with a 76 amino acid N-terminal inactive protein that is cleaved from the molecule to release brain natriuretic peptide (BNP)¹. NT-proBNP may affect cardio-renal homeostasis and it can induce of cGMP although its potency is very low compared to brain natriuretic peptide³². C Reactive Protein (CRP) can interact with NT-proBNP, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human NT-proBNP and recombinant human CRP. Briefly, NT-proBNP was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to CRP-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-NT-proBNP pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C , 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 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human NT-proBNP and recombinant human CRP was shown in Figure 1, the EC₅₀ for this effect is 4.2 µg/mL.

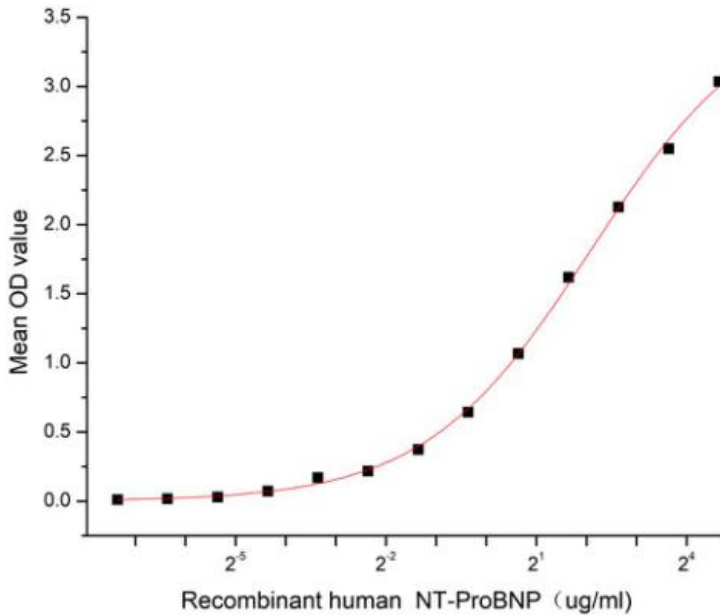


Figure 1. The binding activity of recombinant human NT-proBNP and recombinant human CRP

[IDENTIFICATION]

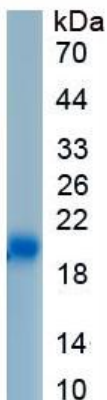


Figure 2. SDS-PAGE**Sample: Active recombinant NT-ProBNP, Human****[IMPORTANT NOTE]**

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.