APD230Hu01 100μg
Active Troponin I Type 2, Fast Skeletal (TNNI2)
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: Prokaryotic expression.
Host: *E. coli*
Residues: Met1~Ser182
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% Sarcosyl, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.9
Predicted Molecular Mass: 22.6kDa
Accurate Molecular Mass: 26kDa 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]

MGDEEKRNRA ITARRQHLKS VMLQIAATEL EKEESRREAE KQNYLAEHCP
PLHIPGSMSE VQELCKQLHA KIDAAEEEKY DMEVRVQKTS KELEDMNQKL
FDLRGKFKRP PLRRVRMSAD AMLKALLGSK HKVCMDLRAN LKQVKKEDTE
KERDLRDVGD WRKNIEEKSG MEGRKKMFES ES

[ACTIVITY]

Troponin I Type 2, Fast Skeletal (TNNI2) is a protein specific to fast - twitch skeletal muscles. As a component of the troponin complex, it plays a crucial role in muscle contraction regulation. TNNI2 works closely with TNNC2. When calcium ion binds to TNNC2, the conformation of TNNC2 changes and is transmitted to TNNI2, which promotes the dissociation of TNNI2 from actin and releases the inhibition, so that actin binds to myosin, triggering muscle contraction, and the interaction of the two finely regulates the process of muscle contraction.Thus a functional ELISA assay was conducted to detect the interaction of recombinant human TNNI2 and recombinant human TNNC2. Briefly, TNNI2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to TNNC2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-TNNI2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, 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 450/630nm immediately. The binding activity of recombinant humanTNNI2 and recombinant human TNNC2 was shown in Figure 1, the EC50 for this effect is 0.068ug/mL.

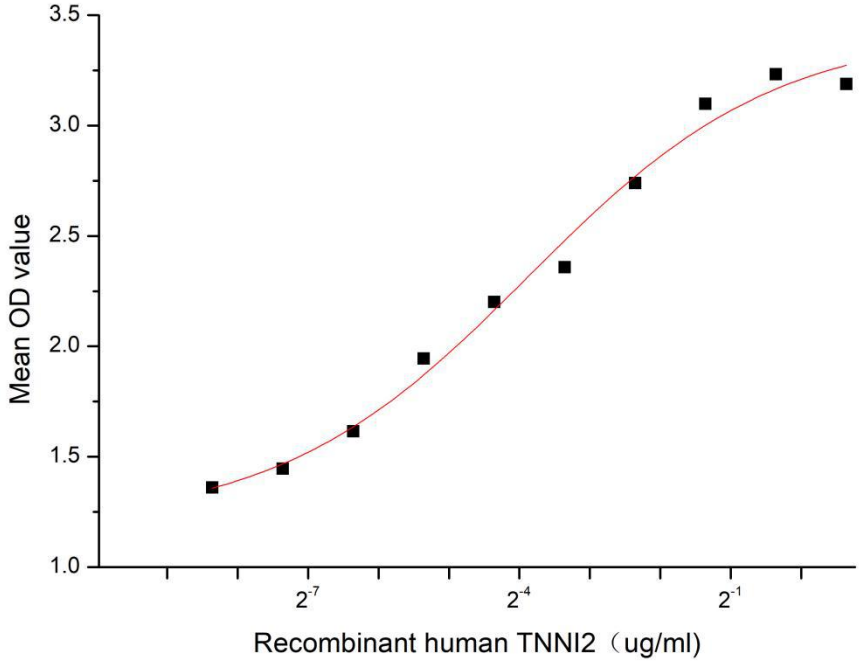

Figure 1. The binding activity of recombinant TNNI2 and human TNNC2

[IDENTIFICATION]

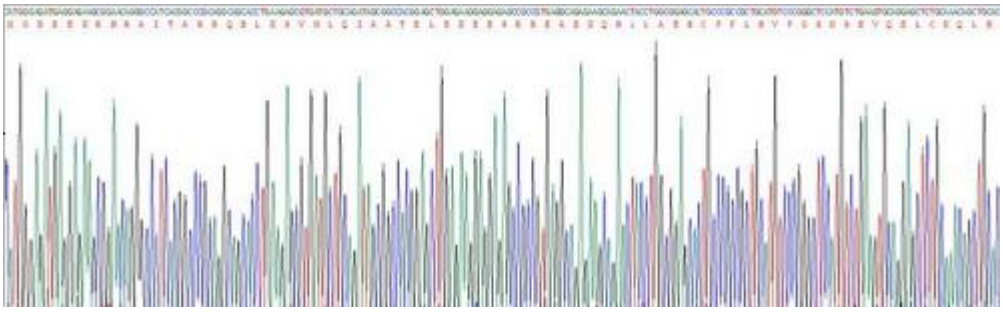

Figure 2. Gene Sequencing (extract)

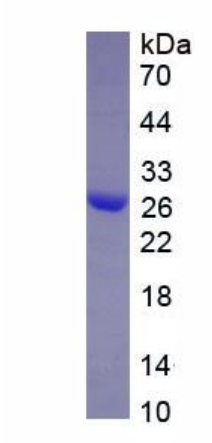

Figure 3. SDS-PAGE

Sample: Active recombinant TNNI2, 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.