APD232Hu01 100μg
Active Troponin T Type 2, Cardiac (TNNT2)
Organism Species: *Homo sapiens (Human)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Met1~Lys295
Tags: N-terminal His and GST Tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
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: 4.6
Predicted Molecular Mass: 65.6kDa
Accurate Molecular Mass: 70kDa 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 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]

MSDIEEVVEE YEEEEQEEAA VEEEEDWRED EDEQEEAAEE DAEAEAETEE
TRAEEDEEEE EAKEAEDGPM EESKPKPRSF MPNLVPPKIP DGERVDFDDI
HRKRMEKDLN ELQALIEAHF ENRKKEEEEL VSLKDRIERR RAERAEQQRI
RNEREKERQN RLAEERARRE EEENRRKAED EARKKKALSN MMHFGGYIQK
TERKSGKRQT EREKKKKILA ERRKVLAIDH LNEDQLREKA KELWQSIYNL
EAEKFDLQEK FKQQKYEINV LRNRINDNQK VSKTRGKAKV TGRWK

[ACTIVITY]

Troponin T Type 2, Cardiac (TNNT2) is one of three troponin isoforms found in the tropomyosin-troponin complex. This complex is responsible for the calcium sensitivity of the contractile apparatus in the muscle. Cardiac Troponin T is used as a biological marker for cardiomyocytes and its level in serum is frequently used as an indicator of myocardial cell injury. Besides, Troponin I Type 3, Cardiac (TNNI3) has been identified as an interactor of TNNT2, thus a binding ELISA assay was conducted to detect the interaction of recombinant human TNNT2 and recombinant human TNNTI3. Briefly, TNNT2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100μl were then transferred to TNNI3-coated microtiter wells and incubated for 1h at 37℃. Wells were washed

with PBST and incubated for 1h with anti-TNNT2 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 50μL stop solution to the wells and read at 450/630nm immediately. The binding activity of TNNT2 and TNNI3 was shown in Figure 1, and this effect was in a dose dependent manner.

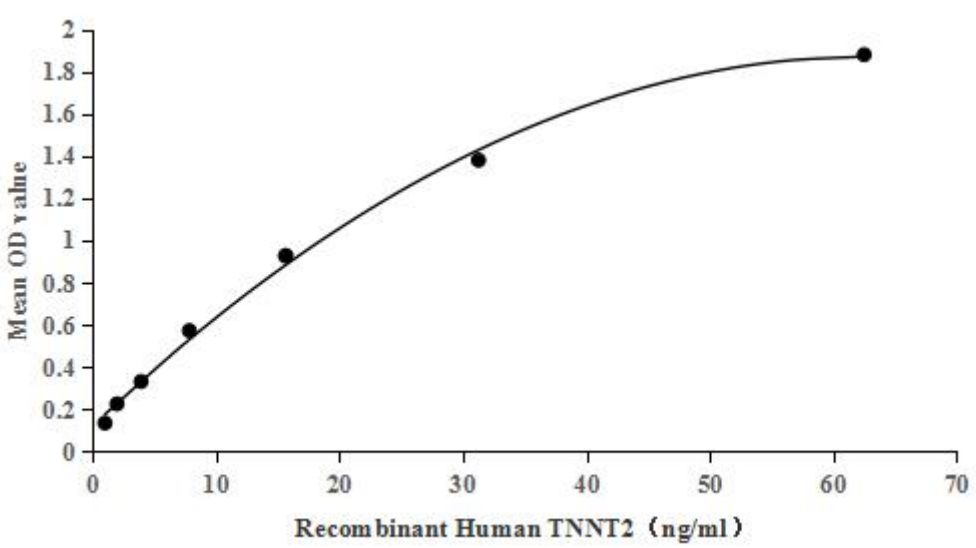

Figure 1. The binding activity of TNNT2 with TNNI3

[IDENTIFICATION]

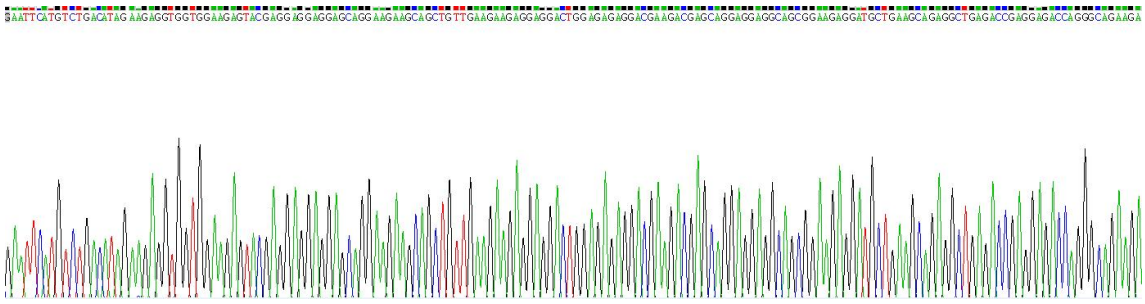

Figure 2. Gene Sequencing (extract)

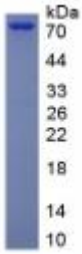

Figure 3. SDS-PAGE

Sample: Active recombinant TNNT2, Human

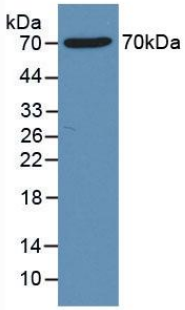

Figure 4. Western Blot

Sample: Recombinant TNNT2, Human;

Antibody: Rabbit Anti- Human TNNT2 Ab (PAA232Hu01)

[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.