**APB653Hu61 100μg**
**Active Myostatin (MSTN)**
**Organism Species: *Homo sapiens (Human)***
***Instruction manual***

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

# [ PROPERTIES ]

**Source:** Eukaryotic expression.
**Host:** 293F cell
**Residues:** Asn24~Ser375
**Tags:** N-terminal His-tag
**Purity:** >95%
**Endotoxin Level:** <1.0EU per 1μg (determined by the LAL method).
**Buffer Formulation:** 10mM PBS, pH7.6, containing 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:** 6.4
**Predicted Molecular Mass:** 40.3kDa
**Accurate Molecular Mass:** 54kDa 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 (pH7.6) 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 ]

NENSEQK ENVEKEGLCN ACTWRQNTKS
SRIEAIKIQI LSKLRLETAP NISKDVIRQL LPKAPPLREL IDQYDVQRDD
SSDGSLEDDD YHATTETIIT MPTESDFLMQ VDGKPKCCFF KFSSKIQYNK
VVKAQLWIYL RPVETPTTVF VQILRLIKPM KDGTRYTGIR SLKLDMNPGT
GIWQSIDVKT VLQNWLKQPE SNLGIEIKAL DENGHDLAVT FPGPGEDGLN
PFLEVKVTDT PKRSRRDFGL DCDEHSTESR CCRYPLTVDF EAFGWDWIIA
PKRYKANYCS GECEFVFLQK YPHTHLVHQA NPRGSAGPCC TPTKMSPINM
LYFNGKEQII YGKIPAMVVD RCGCS

## [ ACTIVITY ]

Myostatin (MSTN) also known as growth differentiation factor 8 (GDF-8) is a member of the TGF beta protein family. Myostatin is a secreted growth differentiation factor that produced and released by myocytes. This protein negatively regulates skeletal muscle cell proliferation and differentiation. Besides, Bone Morphogenetic Protein 1 (BMP1) has been identified as an interactor of MSTN, thus a binding ELISA assay was conducted to detect the interaction of recombinant human MSTN and recombinant human BMP1. Briefly, MSTN were

diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to BMP1-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-MSTN 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℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of MSTN and BMP1 was shown in Figure 1, and this effect was in a dose dependent manner.

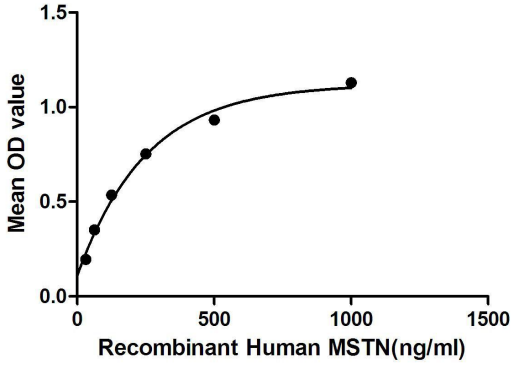


**Figure 1. The binding activity of MSTN with BMP1.**

## [ IDENTIFICATION ]

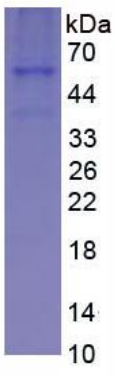

**Figure 2. SDS-PAGE**

**Sample: Active recombinant MSTN, Human**

## [ IMPORTANT NOTE ]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.