

APA013Hu02 50µg
Active Active Bone Morphogenetic Protein 2 (BMP2)
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: Leu24~Arg396

Tags: N-terminal His-tag

Purity: >92%

Endotoxin Level: <1.0EU per 1mL (determined by the LAL method).

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% SKL, 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: 9.2

Predicted Molecular Mass: 46.1kDa

Accurate Molecular Mass: 46kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in ddH₂O to a concentration of 0-0.1 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]

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                LVPELGR RKFAAASSGR PSSQPSDEVL
SEFELRLLSM FGLKQRPTPS RDAVPPYML DLYRRHSGQP GSPAPDHRLE
RAASRANTVR SFHHEESLEE LPETSGKTR RFFFNLSSIP TEEFITS AEL
QVFREQMQDA LGNSSFHHR INIYEIIPKA TANSKFPVTR LLDTRLVNQN
ASRWESFDVT PAVMRWTAQG HANHGFVVEV AHLEEKQGV S KRHVRI SRSL
HQDEHSWSQI RPLLVTFGHD GKGHPLHKRE KRQAKHKQRK RLKSSCKRHP
LYVDFSDVGW NDWIVAPPGY HAFYCHGECF FPLADHLNST NHAIVQTLVN
SVNSKIPKAC CVPTELSAIS MLYLDENEKV VLKNYQDMVV EGCGCR
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[ACTIVITY]

Bone morphogenetic protein 2 (BMP2) belongs to the TGF- β superfamily of proteins. It plays an important role in the development of bone and cartilage. BMP2 is involved in the hedgehog pathway, TGF beta signaling pathway, and in cytokine-cytokine receptor interaction. It also participated in cardiac cell differentiation and epithelial to mesenchymal transition. Like many other proteins from the BMP family, BMP2 has been demonstrated to potently induce osteoblast differentiation in a variety of cell types. Besides, Follistatin Like Protein 1 (FSTL1) has been identified as an interactor of BMP2, thus a binding ELISA assay was conducted to detect the interaction of recombinant human BMP2 and recombinant human FSTL1. Briefly, BMP2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ L were then transferred to FSTL1-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-BMP2 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 BMP2 and FSTL1 was shown in Figure 1, and this effect was in a dose dependent manner.

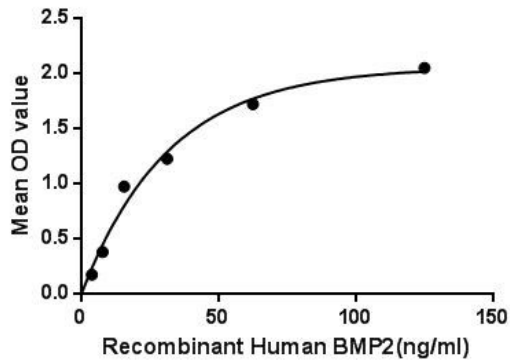


Figure 1. The binding activity of BMP2 with FSTL1.

[IDENTIFICATION]

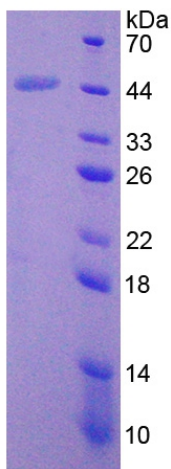


Figure 2. SDS-PAGE

Sample: Active recombinant BMP2, Human

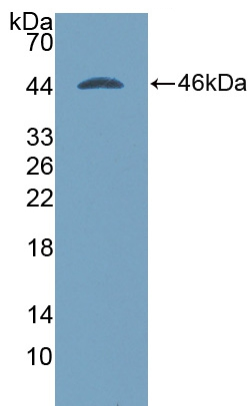


Figure 3. Western Blot

Sample: Recombinant BMP2, Human;

Antibody: Rabbit Anti-Human BMP2 Ab (PAA013Hu02)

[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.