

**APA014Hu02 10µg**  
**Active Bone Morphogenetic Protein 4 (BMP4)**  
**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:** Ser22~Arg408

**Tags:** N-terminal His-tag

**Purity:** >98%

**Buffer Formulation:** 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl and 5% trehalose.

**Applications:** Cell culture; Activity Assays; In vivo assays.

(May be suitable for use in other assays to be determined by the end user.)

**Predicted isoelectric point:** 9.0

**Predicted Molecular Mass:** 48.0kDa

**Accurate Molecular Mass:** 48kDa as determined by SDS-PAGE reducing conditions.

## **[ 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 ]**

```
SHASLIPET GKKKVAEIQG HAGGRRSGQS
HELLRDFEAT LLQMFG LRRR PPSKSAVIP DYMRLYRLQ SGEEEEEEQIH
STGLEYPERP ASRANTVRSF HHEEHLENIP GTSENSAFRF LFNLS SIPEN
EVISSAELRL FREQVDQGPD WERGFHRINI YEVMKPPAEV VPGHLITRLL
DTRLVHHNVT RWETFVSPA VLRWTREKQP NYGLAIEVTH LHQTRTHQGG
HVRISRSLPQ GSGNWAQLRP LLVTFGH DGR GHALTRRRRA KRSPKHHSQR
ARKKNKNCRR HSLYVDFSDV GWNDWIVAPP GYQAFYCHGD CPFPLADHLN
STNHAI VQTL VNSVNSSIPK ACCVPTELSA ISMLYLDEYD KVV LKNYQEM
VVEGCGCR
```

## **[ ACTIVITY ]**

BMP4 (Bone morphogenetic protein 4) is a member of the bone morphogenetic protein family, which is involved in bone and cartilage development, specifically tooth and limb development and fracture repair. It has been proven that HJV (Hemojuvelin) acts as a coreceptor of BMPs, including BMP4; therefore, a binding ELISA assay was constructed to detect the association of recombinant human BMP4 with recombinant human HJV. Briefly, BMP4 were diluted serially in PBS, with 0.01%BSA (pH 7.4). Duplicate samples of 100uL were then transferred to HJV-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-BMP4 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 BMP4 with HJV was shown in Figure 1 and this effect was in a dose dependent manner.

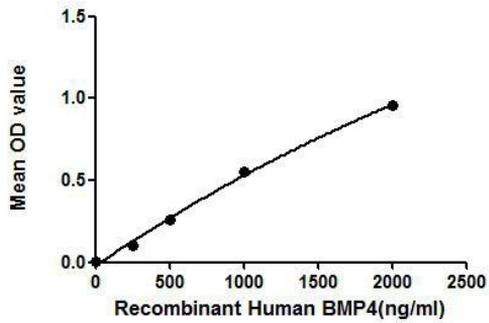


Figure 1. The binding activity of BMP4 with HJV.

## [ IDENTIFICATION ]

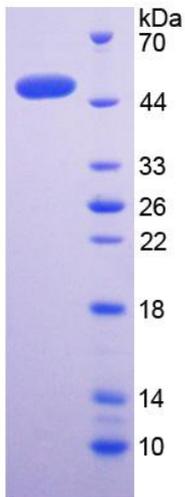
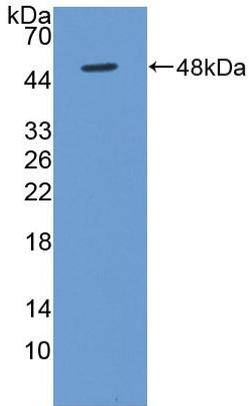


Figure 2. SDS-PAGE

Sample: Active recombinant BMP4, Human



**Figure 3. Western Blot**

**Sample: Recombinant BMP4, Human;**

**Antibody: Rabbit Anti-Human BMP4 Ab (PAA014Hu02)**

**[ 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.