

APC105Mu01 100µg
Active Bone Morphogenetic Protein 8B (BMP8B)
Organism Species: *Mus musculus (Mouse)*
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: Gly20~His399

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: Cell culture; Activity Assays.

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

Predicted isoelectric point: 7.4

Predicted Molecular Mass: 46.7kDa

Accurate Molecular Mass: 47kDa 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 2-8°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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      G  GHLSHPPHVF  PQRRLGVREP  RDMQREIREV
LGLPGRPRSR  APVGAAQQA  SAPLFMLDLY  RAMTDDSGGG  TPQPHLDRAD
LIMSFVNIVE  RDRTLGYQEP  HWKEFHFDLT  QIPAGEAVTA  AEFRIYKEPS
THPLNTTLHI  SMFEVVQEH  NRESDLFFLD  LQTLRSGDEG  WLVLDTAAS
DRWLLNHHKD  LGLRLYVET  DGHSIDPGLA  GLLGRQAPRS  RQPFMVGFRR
ANQSPVRAPR  TARPLKKKQL  NQINQLPHSN  KHLGILDDGH  GSHGREVCRR
HELYVSFRDL  GWLDSVIAPQ  GYSAYYCAGE  CIYPLNSCMN  STNHATMQAL
VHLMKPDIIIP  KVCCVPTELS  AISLLYYDRN  NNVILRRERN  MVVQACGCH
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[ACTIVITY]

Bone Morphogenetic Protein 8B (BMP8B) is a protein that belongs to the bone morphogenetic protein family, which is involved in the regulation of growth and differentiation of various cell types, including osteoblasts, chondrocytes, and neurons. It plays a role in skeletal development and tissue repair processes. Besides, Bone Morphogenetic Protein 8A (BMP8A) has been identified as an interactor of BMP8B, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse BMP8B and recombinant human BMP8A. Briefly, a functional ELISA assay was conducted to detect the interaction of recombinant mouse BMP8B and recombinant human BMP8A. Briefly, BMP8B was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to BMP8A-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-BMP8B pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally,

add 50 μ L stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant mouse BMP8B and recombinant human BMP8A was shown in Figure 1, the EC₅₀ for this effect is 0.078ug/mL.

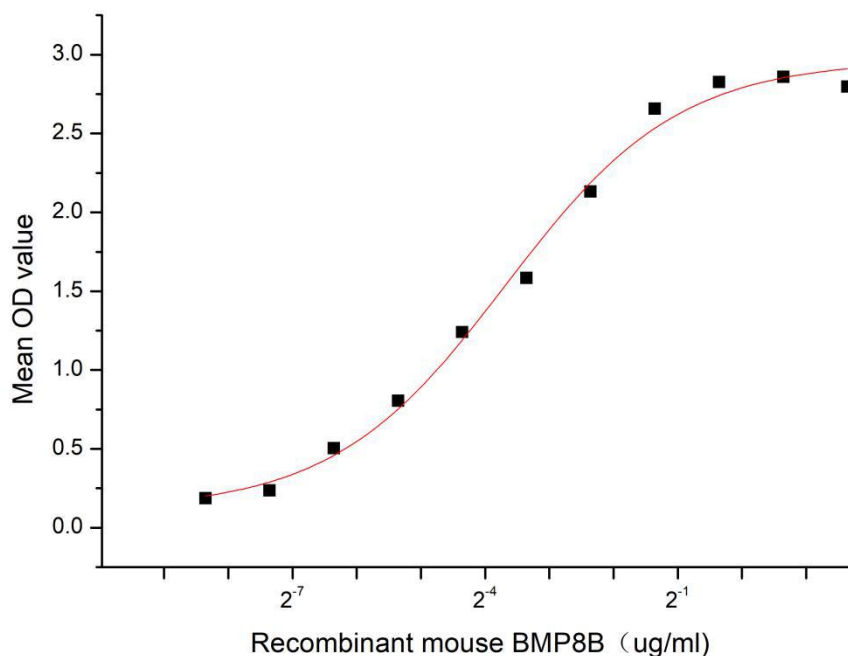


Figure 1. The binding activity of recombinant mouse BMP8 and human BMP8A

Bone Morphogenetic Protein 8B (BMP8B) belongs to the bone morphogenetic protein family, which is involved in the regulation of growth and differentiation of various cell types, including osteoblasts, chondrocytes, and neurons. It also plays a role in skeletal development and tissue repair processes. To test the effect of BMP8B on cell proliferation, DU145 cells were seeded into triplicate wells of 96-well plates and allowed to attach, replaced with various concentrations of recombinant mouse BMP8B. After incubated for 72 h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μ L of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after

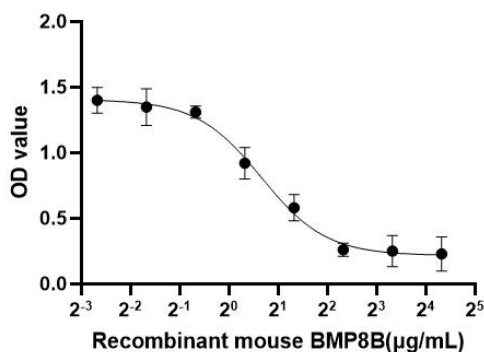


Figure2. The dose-effect curve of recombinant mouse BMP8B on DU145 cells

[IDENTIFICATION]

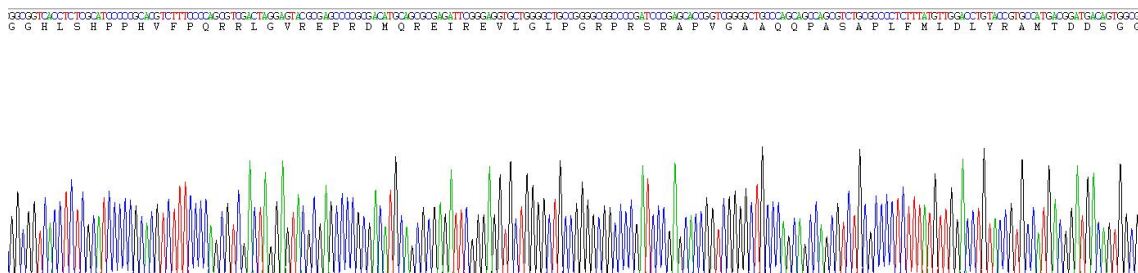


Figure 3. Gene Sequencing (extract)

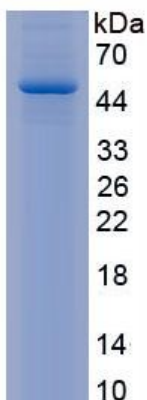


Figure 4. SDS-PAGE

Sample: Active recombinant BMP8B, Mouse

[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.