

## Bone Morphogenetic Protein 4 (BMP4) Active Protein | BMP4 active protein

Active Bone Morphogenetic Protein 4 (BMP4)

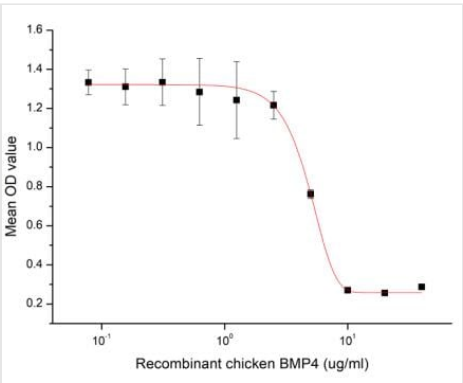
|                               |                       |                                                     |
|-------------------------------|-----------------------|-----------------------------------------------------|
| CATALOG #<br><b>AAA161653</b> | HOST<br><b>E Coli</b> | APPLICATIONS<br><b>Activity Assay, Cell Culture</b> |
|-------------------------------|-----------------------|-----------------------------------------------------|

### PRODUCT SYNONYMS

Bone Morphogenetic Protein 4 (BMP4); Active Bone Morphogenetic Protein 4 (BMP4); Bone Morphogenetic Protein 4; BMP2B; BMP2-B; BMP2B1; ZYME; DVR4; Bone morphogenetic protein 2B4; BMP4 active protein

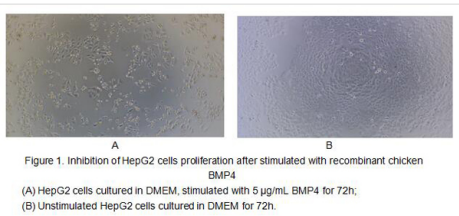
### PRODUCT SPECIFICATIONS

|                                                 |                                                                                              |
|-------------------------------------------------|----------------------------------------------------------------------------------------------|
| Host                                            | E Coli                                                                                       |
| Purity/Purification                             | Greater than 90% by SDS-PAGE                                                                 |
| Form/Format                                     | Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300. |
| Sequence                                        | Ala244~Lys 388                                                                               |
| Applicable Applications for BMP4 active protein | Activity Assay, Cell Culture                                                                 |
| Species                                         | Chicken                                                                                      |
| Expression System                               | Prokaryotic expression                                                                       |
| Tag                                             | N-terminal His Tag                                                                           |
| Endotoxin Level                                 | <1.0EU per 1ug (determined by the LAL method)                                                |
| Isoelectric Point                               | 9.3                                                                                          |
| Research Area                                   | Developmental science, Bone metabolism                                                       |
| Preparation and Storage                         | Store at 2-8 degree C for one month, -80 degree C for 12 months                              |



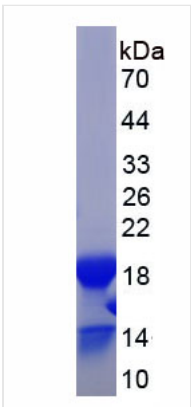
Bioactivity

Figure 2. Inhibition of HepG2 cells proliferation after stimulated with recombinant chicken BMP4



Bioactivity

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. To test the effect of BMP4 on cell apoptosis, HepG2 cells were seeded into triplicate wells of 96-well plates at a density of 4,000 cells/well and allowed to attach overnight, then the medium was replaced with various concentrations of recombinant chicken BMP4 diluted with 5% serum standard DMEM. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10  $\mu$ 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 incubating the plate for 1-4 hours at 37 degree C. Apoptosis of HepG2 cells after incubation with BMP4 for 72h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with recombinant chicken BMP4 for 72h. The result was shown in Figure 2. It was obvious that BMP4 significantly decreased cell viability of HepG2 cells. The ED50 of recombinant chicken BMP4 is 4.86  $\mu$ g/ml.



SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

|                                                   |                 |
|---------------------------------------------------|-----------------|
| Product Categories/Family for BMP4 active protein | Active proteins |
|---------------------------------------------------|-----------------|

NCBI AND UNIPROT INFORMATION

|                                  |                              |
|----------------------------------|------------------------------|
| NCBI GI #                        | 2501175                      |
| NCBI GeneID                      | 396165                       |
| UniProt Accession #              | Q90752                       |
| Molecular Weight                 | 46,057 Da                    |
| NCBI Official Full Name          | Bone morphogenetic protein 4 |
| NCBI Official Synonym Full Names | bone morphogenetic protein 4 |
| NCBI Official Symbol             | BMP4                         |
| NCBI Official Synonym Symbols    | BMP-4                        |
| NCBI Protein Information         | bone morphogenetic protein 4 |

|                            |                              |
|----------------------------|------------------------------|
| UniProt Protein Name       | Bone morphogenetic protein 4 |
| UniProt Gene Name          | <b>BMP4</b>                  |
| UniProt Synonym Gene Names | BMP-4; BMP-4                 |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/bone-morphogenetic-protein-4-bmp4/161653>