BMP7 Protein (AA 292-430) (His tag)

## Overview

| Quantity: | $50 \mu \mathrm{~g}$ |
| :--- | :--- |
| Target: | BMP7 |
| Protein Characteristics: | AA 292-430 |
| Origin: | Mouse |
| Source: | Escherichia coli (E. coli) |
| Biological Activity: | Active |
| Purification tag / Conjugate: | This BMP7 protein is labelled with His tag. |
| Application: | Activity Assay (AcA), Cell Culture (CC) |

Product Details

| Characteristics: | Tag location: N-terminal His Tag |
| :--- | :--- |
| Purity: | $>97 \%$ |
| Biological Activity Comment: | BMP7 (Bone morphogenetic protein 7), which belongs to the TGF- $\beta$ superfamily, is a signaling |
|  | molecule with the ability to promote bone formation. BMP7 has also been implicated in various |
|  | types of cancer, including breast cancer. It has been reported that BMP7 treatment induced cell |
|  | growth promotion of MDA-MB-231 breast cancer line. To test the effect of BMP7 on cell |
|  | proliferation, MDA-MB-231 cells were seeded into triplicate wells of 96-well plates at a density |
|  | of 2,000 cells/well and allowed to attach overnight, then the medium was replaced with serum- |
|  | free standard DMEM prior to the addition of various concentrations of BMP7. 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 10 L of CCK-8 solution was added to each well of the plate, then |

for $1-4$ hours at $37^{\circ} \mathrm{C}$.

Target Details

| Target: | BMP7 |
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| Abstract: | BMP7 Products |
| Background: | Alternative Names: OP1, Osteogenic Protein-1, Eptotermin alfa |
| Molecular Weight: | 16.9 kDa |
| UniProt: | P23359 |
| Pathways: | Steroid Hormone Mediated Signaling Pathway, Stem Cell Maintenance |

## Application Details

| Application Notes: | Isoelectric Point: 8.5 |
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| Restrictions: | For Research Use only |
| Handling |  |


| Format: | Lyophilized |
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| Buffer: | 20 mM Tris, $150 \mathrm{mM} \mathrm{NaCl}, \mathrm{pH} 8.0$, containing 1 mM EDTA, $1 \mathrm{mM} \mathrm{DTT}, 0.01 \% \mathrm{SKL}, 5 \%$ |
|  | Trehalose and Proclin300. |
| Preservative: | Dithiothreitol (DTT), Other preservative, ProClin |
| Precaution of Use: | This product contains ProClin and Dithiothreitol (DTT): POISONOUS AND HAZARDOUS |
|  | SUBSTANCES which should be handled by trained staff only. |



Figure 2. The dose-effect curve of BMP7 on MDA-MB-231 cells

Image 1.

Image 2. The dose-effect curve of BMP7 was shown in Figure 2. It was obvious that BMP7 significantly promoted cell proliferation of MDA-MB-231 cells. The ED50 for this effect is typically 3.483 to $9.017 \mathrm{ng} / \mathrm{mL}$.

