

Datasheet for ABIN2666467  
**BMP7 Protein (AA 315-431)**



[Go to Product page](#)

## Overview

Quantity:	10 µg
Target:	BMP7
Protein Characteristics:	AA 315-431
Origin:	Human
Source:	CHO Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Multiplex Assay (MA)

## Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE and HPLC analysis.
Endotoxin Level:	Less than 0.1 ng per µg of protein.

## Target Details

Target:	BMP7
Alternative Name:	BMP-7 ( <a href="#">BMP7 Products</a> )
Background:	Bone morphogenetic proteins (BMPs) belong to the transforming growth factor beta (TGF-β) superfamily. BMPs play a key role in embryonic development, especially during heart, neural and cartilage development. Around 20 BMP family members have been identified and characterized. BMPs signal through serine/threonine kinase receptors, and are composed of type I and II subtypes. Four type I receptors have been identified: type IA and IB BMP receptors,

## Target Details

type IA activin receptor, and activin receptor-like kinase I. Three type II receptors have also been recognized: type II BMP receptor and type II and IIB activin receptors. BMP-7, originally identified by its properties to induce bone formation, has been identified as an anti-fibrotic molecule, antagonizing TGF- $\beta$ 1. Fibrosis is associated with the emergence of fibroblasts originating from endothelial cells, suggesting an endothelial-mesenchymal transition (EndMT). TGF- $\beta$ 1 induces endothelial cells to undergo EndMT, whereas bone BMP-7 preserved the endothelial phenotype. BMP-7 inhibits fibrosis in the kidney, lung, liver, heart, peritonium, oral submucosa tissue, and colonic wall.

**Molecular Weight:** The 117 amino acid recombinant protein has a predicted molecular mass of approximately 13 kDa. Recombinant human BMP-7 is a 28.8 kDa homodimeric glycoprotein. The predicted N-terminal amino acid is Met.

**Pathways:** [Steroid Hormone Mediated Signaling Pathway](#), [Stem Cell Maintenance](#)

## Application Details

**Application Notes:** Optimal working dilution should be determined by the investigator.

**Comment:** Biological activity: BMP-7 induces alkaline phosphatase production on ATDC-5 cells. The ED50 = 0.02 - 0.04  $\mu$ g/ml, corresponding to a specific activity of 2.5 - 5.0 x 10<sup>4</sup> unit/mg.

**Restrictions:** For Research Use only

## Handling

**Format:** Lyophilized

**Reconstitution:** For maximum results, quick spin vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/mL. Do not vortex. It is recommended to further dilute in a buffer containing a carrier protein such as 0.1 % BSA and store working aliquots at -20 °C to -80 °C.

**Buffer:** Lyophilized

**Handling Advice:** Avoid repeated freeze/thaw cycles.

**Storage:** -20 °C

**Storage Comment:** Unopened vial can be stored at -20°C or -70°C.