

Datasheet for ABIN2666465
BMP6 Protein (AA 344-460)



[Go to Product page](#)

Overview

Quantity:	10 µg
Target:	BMP6
Protein Characteristics:	AA 344-460
Origin:	Human
Source:	HEK-293 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:	BMP6
Alternative Name:	BMP-6 (BMP6 Products)
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, composed of type I and II subtypes. Four type I receptors have been identified: type IA and IB BMP receptors, type IA

Target Details

activin receptor, and activin receptor-like kinase I (ALK-1). Three type II receptors have also been recognized: type II BMP receptor and type II and IIB activin receptors. Human recombinant BMP-6 can restore bone in animal models of osteoporosis. BMP-6 induces bone formation through IGF-I and EGF pathways in a murine model of osteopenia and in human osteoblasts. BMP-6 has been reported to have an antiproliferative effect on B, T cells, and macrophages. Also, BMP-6 induced expression of pro-inflammatory inducible nitric oxide synthase (iNOS), TNF- α and IL-1 β in macrophages. In addition, BMP-6 is a key endogenous regulator of hepcidin expression and iron metabolism in vivo. In fact, BMP-6 null mice have a phenotype that resembles mouse models of juvenile hemochromatosis (an iron overload disorder caused by mutations in the genes encoding the major iron regulatory hormone hepcidin and hemojuvelin).

Molecular Weight: The 117 amino acid recombinant protein has a predicted molecular mass of approximately 13 kDa. Recombinant human BMP-6 is a 26.2 kDa homodimeric glycoprotein. The predicted N-terminal amino acid is Val.

Pathways: [Regulation of Hormone Metabolic Process](#), [Regulation of Hormone Biosynthetic Process](#)

Application Details

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

Comment: Biological activity: BMP-6 induces alkaline phosphatase production on ATDC-5 cells. The ED50 = 0.03 - 0.06 μ g/ml, corresponding to a specific activity of 1.6 - 3.3 x 10⁴ 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.