

Active Recombinant Human BMP2 protein

Cat. No. BMP2-01H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human BMP2 protein was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	283-396 aa
Description	Bone Morphogenetic Protein 2 is one of the BMPs, some of which belong to the TGF-beta superfamily (BMP2-7). There are more than thirteen BMPs have been discovered nowadays and they are involved in inducing cartilage and bone formation. BMP-2 is expressed in a variety of tissues including lung, spleen, brain, liver, prostate ovary and small intestine. It is a potent osteoinductive cytokine and plays its role in association with osteoconductive carriers such as collagen and synthetic hydroxyapatite. As it shown to stimulate the production of bone, the recombinant human BMP-2 is available for orthopaedic usage and dentistry. The functional form of BMP-2 is a disulfide-linked homodimer and about 26 kDa The precursor of BMP-2 is 259 a.a., containing the 23 a.a. N-terminal signal sequence which will be cleaved by a furin-type protease to form the mature peptide.
Form	Lyophilized from a 0.2µm filtered concentrated solution containing 10 mM sodium citrate pH 3.5.
Bio-activity	Fully biologically active when compared to standard. The ED50 as determined by inducing alkaline phosphatase production of murine ATDC5 cells is less than 200

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	ng/ml, corresponding to a specific activity of $> 5.0 \times 10^3$ IU/mg.
Molecular Mass	Approximately 26.0 kDa, a homodimeric protein consisting of two 115 amino acid non-glycosylated polypeptide chains.
AA Sequence	MQAKHKQRKRLKSSCKRHPLYVDFSDVGWNDWIVAPPGYHAFYCHGECPFPLADH LNSTNHAIQTLVNSVNSKIPKACCVPTLSAISMLYLDENEKVVLKKNYQDMVVEGC GCR
Endotoxin	Less than 1 EU/g of rHuBMP-2 as determined by LAL method.
Purity	>95% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 centigrade. Further dilutions should be made in appropriate buffered solutions. Do not reconstitute in PBS or cell culture media.

GENE INFORMATION

Gene Name	BMP2
Official Symbol	BMP2
Synonyms	BMP2; bone morphogenetic protein 2; BMP2A; BMP-2A; bone morphogenetic protein

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	2A; BDA2;
Gene ID	650
mRNA Refseq	NM_001200
Protein Refseq	NP_001191
MIM	112261
UniProt ID	P12643

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