

BMP-3A
Catalog # PVGS1350**Specification**

BMP-3A - Product Information

Primary Accession [P55107](#)
Species
Human

Sequence

MQWDEPRVCS RRYLKVD FAD IGWNEWIISP KSFDAYYCAG ACEFPMPKIV RPSNHATIQS IVRAVGIIPG
IPEPCCVPDK MNSLGVLF LD ENRNVVLKVY PNMSVDTCAC R

Purity

> 95% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level

< 0.2 EU/ µg, determined by LAL method.

Formulation

**Lyophilized after extensive dialysis against
4mM HCl.**

Reconstitution

Reconstituted in 4mM HCl at 100 µg/mL.

BMP-3A - Additional Information

Gene ID 2662

Other Names

Growth/differentiation factor 10, GDF-10, Bone morphogenetic protein 3B, BMP-3B, Bone-inducing protein, BIP, GDF10 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=4215 target="_blank">HGNC:4215), BMP3B

Target Background

Bone Morphogenetic Protein-3B (BMP-3B), also known as Growth/Differentiation Factor 10 (GDF-10), is a cytokine belonging to the Transforming Growth Factor β (TGF- β) superfamily. BMP-3B contains the cystine knot motif shared by other TGF- β family members. BMP-3B was originally identified by PCR based on the BMP-3 sequence, and shares 83% identity with BMP-3. BMP-3B and BMP-2 act as mutual antagonists, as they compete for the availability of signaling protein Smad4. *In vivo*, BMP-3B is highly expressed in brain, lungs, and bone tissues. The functions of BMP-3B include acting as a dorsaling factor in head development, inhibition of adipogenesis in adipocytes, and induction of bone formation. BMP-3B is down-regulated in lung cancer patient samples, indicating its potential antitumor activity. Recombinant **human Bone Morphogenetic Protein-3B (rhBMP-3B)** produced in *E. coli* is a disulfide-linked homodimer containing two non-glycosylated polypeptide chains of 111 amino acids each. rhBMP-3B has a molecular mass of 25.1 kDa analyzed by non-reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at .

BMP-3A - Protein Information

Name GDF10 ([HGNC:4215](#))

Synonyms BMP3B

Function

Growth factor involved in osteogenesis and adipogenesis. Plays an inhibitory role in the process of osteoblast differentiation via SMAD2/3 pathway. Plays an inhibitory role in the process of adipogenesis.

Cellular Location

Secreted {ECO:0000250|UniProtKB:P97737}.

Tissue Location

Expressed in femur, brain, lung, skeletal muscle, pancreas and testis.

BMP-3A - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BMP-3A - Images