

BMP 7 Human

Description: Bone Morphogenetic Protein-7 Human Recombinant produced in E.Coli is a monomeric, non-glycosylated, polypeptide chain containing 139 amino acids and having a molecular mass of 15679.97 Dalton. The BMP-7 is purified by proprietary chromatographic techniques.

Synonyms: Osteogenic Protein 1, BMP-7.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Thr-Gly-Ser-Lys.

Purity: Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

BMP-7 was lyophilized from a concentrated (1mg/ml) sterile solution containing 10mM sodium citrate pH=3.5.

Stability:

Lyophilized BMP-7 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BMP 7 Human should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Applications:

1. Molecular standard (Western, ELISA) in studying secreted BMP-7. 2. Preparing antibodies for BMP-7 monomer. 3. Molecule standard in detecting secreted BMP-7 in reduced SDS-PAGE.

Solubility:

It is recommended to briefly centrifuge the vial prior to opening to bring the contents to the bottom. Reconstitute in 20mM-100mM acetic acid at a concentration of 0.1-0.5mg per ml. Stock solutions should be apportioned into working aliquots and stored at $\le -20^{\circ}\text{C}$. Further dilutions should be made in appropriate buffered solutions.

Introduction:

The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. Many BMPs are part of the transforming growth factor-beta (TGF β) superfamily. BMPs were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskelatal site. Based on its expression early in embryogenesis, the BMP encoded by this gene has a proposed role in early development. In addition, the fact that this BMP is closely related to BMP5 and BMP7 has lead to speculation of

References:

Title: Radiographic Evaluation of Pulpal and Periapical Response of Dogs Teeth After Pulpotomy and Use of Recombinant Human Bone Morphogenetic Protein-7 as a Capping Agent. Publication: Journal of Dentistry for Children-75:1, 2008 Radiographic Evaluation after Pulpotomy using rHuBMP-7 da Silva et al. Link: http://www.traducoesemsaude.com/publicacoes/files/Francisco%20BMP%20JCD_2008.pdf

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