

Recombinant human BMP-2. Animal and Endotoxin free

CATALOGUE NUMBER: AMS-370

AVAILABLE SIZES: 10µg, 50µg, 100µg, 1000µg

DESCRIPTION

Human Bone Morphogenetic Protein-2 (BMP-2) is a member of the TGF-beta superfamily of cytokines that effect bone and cartilage formation. Human BMP-2 is a disulphide linked homodimeric protein. BMP-2 plays an important role in various processes during embryonic development, including induction of bone and cartilage growth and regeneration, cardiac cell differentiation and epithelial to mesenchymal transition. BMP2 promotes osteogenic and chondrogenic differentiation from mesenchymal cells, stem cells, and vascular smooth muscle cells. BMP-2 has great potentials for regenerative and medical therapeutic applications.

SOURCE

Nicotiana tobacum

FORMULATION

This product was lyophilized from a concentrated sterile solution containing 25 mM MES, pH 6

PURITY

>95% pure

RECONSTITUTION

Note: Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 50 µg/ml. Due to the protein nature, dimmers and multimers may be observed. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

STABILITY

The lyophilized protein, though stable at 2-8°C in the short term, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

BIOLOGICAL ACTIVITY

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. The bioactivity of recombinant human BMP-2 was determined by its dose dependent induction of alkaline phosphatase production by ATDC-5 mouse chondrogenic cells. The ED50 value for this effect is typically below 75 ng/ml corresponding to specific activity of $> 1.3 \times 10^4$ U/mg. Optimal concentration should be determined for specific applications and cell lines.

ENDOTOXIN LEVEL

Endotoxin level is less than 0.05 EU/ug as measured by LAL method.

MOLECULAR WEIGHT

Bone Morphogenetic Protein-2 Human Recombinant produced in transgenic tobacco plants is a homodimeric polypeptide chain containing 114 amino acids and has a molecular mass of 26 kDa.

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