

PRODUCT DESCRIPTION:

BMP-4 (Bone Morphogenetic Protein 4) is a member of the transforming growth factor β (TGF- β) superfamily. BMPs have been shown to be key regulators of embryogenesis and are known to play a role in the growth and differentiation of various cell types, including embryonic stem cells (ESCs), mesenchymal cells, epithelial cells, hematopoietic cells, and neuronal cells. The mature recombinant human BMP-4 is a disulfide-linked homodimeric protein consisting of two 116 amino acid residue subunits, and is generated by the proteolytic removal of the signal peptide and propeptides. The monomer has a calculated molecular mass of approximately 13 kDa, but migrates as an approximately 22 kDa protein under reducing conditions in SDS-PAGE due to glycosylation.

Product Information Sheet

CYTOKINES



RECOMBINANT HUMAN BMP-4

Catalog #02524 10 μ g/vial

SOURCE:

The DNA sequence encoding the human BMP-2 signal peptide and propeptide (amino acid residues 1 - 282 of human BMP-2) fused to the human BMP-4 mature chain (amino acid residues 293 - 408 of human BMP-4) (Wozney, J. *et al.*, 1988, Science 242: 1528 - 1534) was expressed in a mouse myeloma cell line, NS0.

PURITY:

Greater than 95% as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is less than 1.0 EU per 1 μ g of the cytokine, as determined by the LAL method.

FORMULATION:

Lyophilized from a sterile-filtered solution in 30% acetonitrile, 0.1% TFA containing 50 μ g of bovine serum albumin per 1 μ g of cytokine.

RECONSTITUTION:

It is recommended that sterile 4 mM HCl containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of no less than 10 μ g/mL.

STABILITY AND STORAGE:

The lyophilized powder is stable for greater than six months at -20°C to -70°C.

Reconstituted BMP-4 can be stored under sterile conditions at 2°C to 4°C for one month or at -20°C to -70°C for three months without detectable loss of activity.

Avoid repeated freezing and thawing.

ACTIVITY:

The ED₅₀ as measured by its ability to induce alkaline phosphatase production by mouse ATDC5 chondrogenic cells (Nakamura, K. *et al.*, 1999, Exp. Cell Res. 250: 351) is typically 10 - 30 ng/mL.

See Material Safety Data Sheet for more information.

**THIS REAGENT IS FOR RESEARCH ONLY.
IT IS NOT TO BE ADMINISTERED TO HUMANS.**

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