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Product datasheet for TP728299

Recombinant BMP-4 (Bone morphogenetic protein-4), Mouse

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant BMP-4 (Bone morphogenetic protein-4), Mouse
Species:	Mouse
Expression Host:	E. coli
Expression cDNA Clone or AA Sequence:	MKKNKNCRRHSLYVDFSDVGWNDWIVAPPGYQAFYCHGDCPFPLADHLNSTNHAIVQTLVNSVNSSIPK ACCVPTELSAISMLYLDEYDKVVLKNYQEMVVEGCGCRwith polyhistidine tag at the C-terminus.
Tag:	His Tag (C-term)
Predicted MW:	The protein has a calculated MW of 12.88 kDa. The protein migrates as 11-17 kDa under reducing condition (SDS-PAGE analysis).
Purity:	>98% as determined by SDS-PAGE.
Buffer:	The protein was lyophilized from a 0.2 μm filtered solution containing 20 mM sodium carbonate, pH 4.5.
Bioactivity:	Measure by its ability to induce alkaline phosphatase production by ATDC5 cells. The ED_{50} for this effect is <10 ng/mL. The specific activity of recombinant mouse BMP-4 is > 1 x 10^5 IU/mg.
Endotoxin:	<0.1 EU per 1 μg of the protein by the LAL method.
Reconstitution Method:	Centrifuge at 3000 rpm for 5 mins before opening. It is recommended to reconstitute the lyophilized protein in sterile H_2O to a concentration not less than 100 μg/mL and incubate the stock solution at room temperature for at least 20 mins to ensure sufficient re-dissolved. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.
Applications:	Cell culture
Storage:	Lyophilized protein should be stored at -20°C for 1 year. Upon reconstitution, store at 2°C to 8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10%FBS, 5%HSA or 5% trehalose solution), protein aliquots should be stored at -20°C or -80°C for 3-6 months. Avoid repeated freeze/thaw cycles.
UniProt ID:	P21275
Synonyms:	BMP-2B, DVR4

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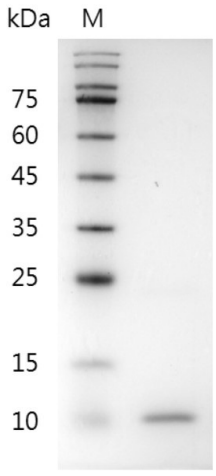
Summary: Bone Morphogenetic Protein-4 (BMP-4) predicts a molecular mass of 13 kDa, is a vital regulatory molecule that functions throughout human development in mesoderm induction, tooth development, limb formation, bone induction, and fracture repair and is overexpressed in patients who have fibrodysplasia ossificans progressiva. BMP-4 is a critical signaling molecule required for the early differentiation of the embryo and establishing of a dorsal-ventral axis. BMP-4 is secreted from the dorsal portion of the notochord, and it acts in concert with sonic hedgehog to establish a dorsal-ventral axis for the differentiation of later structures.

Product images:



SDS- PAGE analysis of recombinant mouse BMP-4