

Product datasheet for **TP724710**

BMP4 Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant Human BMP-4 (C-hFc)
Species:	Human
Expression cDNA Clone or AA Sequence:	Ser293-Arg408
Tag:	C-Human Fc
Buffer:	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Note:	Recombinant Human BMP-4 (C-hFc) is produced by Human Cells. The target gene encoding Ser293-Arg408 is expressed with a C-hFc tag.
Storage:	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-5 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Stability:	12 months from date of despatch
Locus ID:	652
UniProt ID:	P12644
Synonyms:	BMP2B, DVR4

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Summary:	<p>BMP-4 is a TGF-beta superfamily ligand that is widely expressed from early embryogenesis through adulthood. It plays an important role in mesenchyme formation, epidermal determination, suppression of neural induction, the development of multiple organs, and tissue repair (1-5). The human BMP-4 precursor contains a 273 amino acid (aa) propeptide and a 116 aa mature protein (6). Processing of the propeptide by furin or proprotein convertase 6 enables the formation of the mature disulfide-linked homodimeric BMP-4 and facilitates its secretion. Similar intracellular processes may lead to the formation and recreation of BMP4/BMP7 disulfide-linked heterodimer (7-9). Mature human and mouse BMP-4 share 98% aa sequence identity. Human BMP-4 shares 85% aa sequence identity with human BMP-2 and less than 50% with other human BMPs. Compared to BMP-4 homodimers, BMP-4/BMP-7 heterodimers exhibit a greater potency in inducing osteogenic differentiation (9). In <i>Xenopus</i>, the heterodimers can also induce the formation of mesoderm, whereas BMP-4 homodimers only provide ventralizing signals for existing mesoderm (10). BMP-4 signals through tetrameric complexes composed of type I (primarily Activin RIA or BMPR-IA) and type II (primarily Activin RIIA or BMPR-II) receptors (11, 12). The bioavailability of BMP-4 is regulated by its interaction with multiple proteins and glycosaminoglycans (13-15).</p>
Protein Families:	<p>Adult stem cells, Cancer stem cells, Druggable Genome, Embryonic stem cells, Induced pluripotent stem cells, Secreted Protein, Stem cell relevant signaling - TGFb/BMP signaling pathway</p>
Protein Pathways:	<p>Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer, TGF-beta signaling pathway</p>