

Recombinant Human BMP4 Protein, Ser293-Arg408

Cat. No. BMP4-24H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human BMP-4 protein (Ser293-Arg408) without tag was expressed in Mouse myeloma cell line.
Species	Human
Source	Mouse myeloma cell
ProteinLength	Ser293-Arg408
Description	This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preproprotein is proteolytically processed to generate each subunit of the disulfide-linked homodimer. This protein regulates heart development and adipogenesis. Mutations in this gene are associated with orofacial cleft and microphthalmia in human patients. The encoded protein may also be involved in the pathology of multiple cardiovascular diseases and human cancers.
Form	Disulfide-linked homodimer
Bio-activity	Measured by its ability to induce BMP responsive SEAP reporter activity in HEK293 human embryonic kidney cells. The ED50 for this effect is 0.70-7.00 ng/mL. Measured by its ability to induce alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED50 for this effect is 3.00-30.0 ng/mL.

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Molecular Mass	Predicted Molecular Mass: 13 kDa (monomer) SDS-PAGE: 19-24 kDa, reducing conditions, 35-41 kDa, non-reducing conditions
Endotoxin	< 0.01 EU/μg by LAL
Purity	> 95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
N-terminal Sequence Analysis	Ser293
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -70 centigrade under sterile conditions after reconstitution.
Storage Buffer	Lyophilized from a 0.2 μm filtered solution in Acetonitrile and TFA with BSA as a carrier protein.
Shipping	The product is shipped at ambient temperature.
Reconstitution	Reconstitute at 50-200 μg/mL in sterile 4 mM HCl containing at least 0.1% human or bovine serum albumin.
References	1. Zhang, P. et al. (2008) Blood 111:1933. 2. Gambaro, K. et al. (2006) Cell Death Differ. 13:1075. 3. Simic, P. and S. Vukicevic (2005) Cytokine Growth Factor Rev. 16:299.

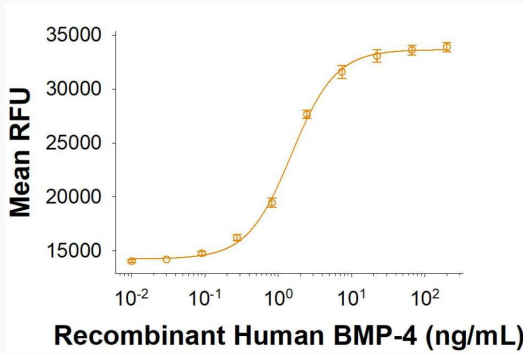
GENE INFORMATION

Gene Name	BMP4 bone morphogenetic protein 4 [Homo sapiens (human)]
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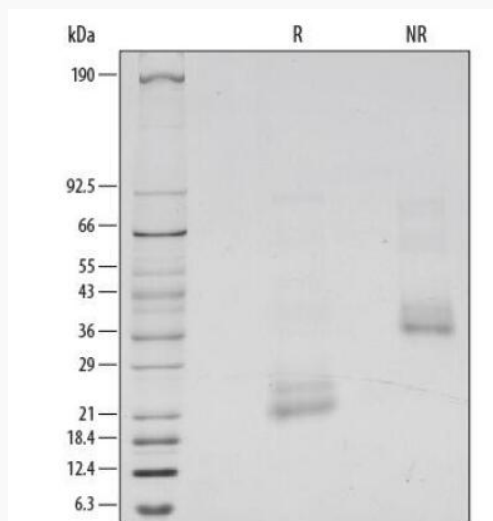
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Official Symbol	BMP4
Synonyms	BMP4; bone morphogenetic protein 4; ZYME; BMP2B; OFC11; BMP2B1; MCOPS6; bone morphogenetic protein 4; bone morphogenetic protein 2B
Gene ID	652
mRNA Refseq	NM_001202
Protein Refseq	NP_001193
MIM	112262
UniProt ID	Q53XC5
Bioactivity	 Recombinant Human BMP-4 induces BMP responsive SEAP reporter activity in HEK293 human embryonic kidney cells. The ED50 for this effect is 0.70-7.00 ng/mL.

SDS-PAGE



1 µg/lane of Recombinant Human BMP-4 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing major bands at 19-24 kDa and 35-41 kDa, respectively. Multiple bands in gel are due to variable glycosylation.