

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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 45-1 Ramsey Road, Shirley, NY 11967, USA

| | |
|-------------------------------------|---|
| 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 | <ol style="list-style-type: none"> 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

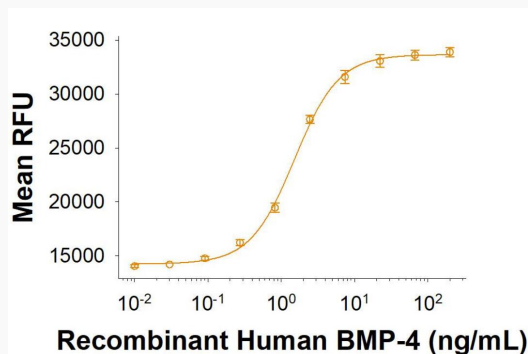
Gene Name [BMP4 bone morphogenetic protein 4 \[Homo sapiens \(human\) \]](#)

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|------------------------|---|
| 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 |

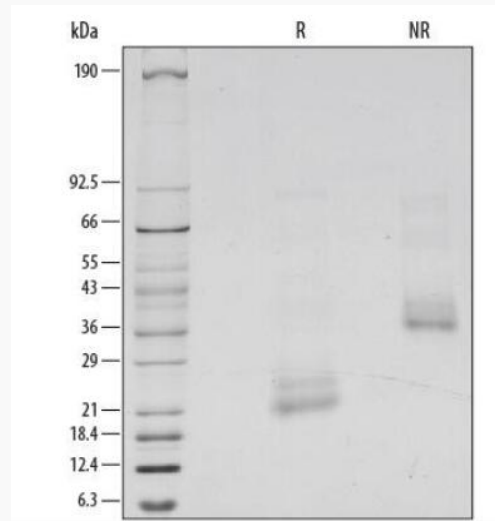
Bioactivity


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.

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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.

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