



### Synonym

BMP4,BMP2B,BMP2B1,MCOPS6,OFC11,ZYME

### Source

Human BMP-4 Protein, premium grade(BM4-H5317) is expressed from CHO cells. It contains AA Ser 293 - Arg 408 (Accession # [NP\\_001193.2](#)).

Predicted N-terminus: Ser

*It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.*

### Molecular Characterization

**BMP-4(Ser 293 - Arg 408)**  
**NP\_001193.2**

This protein carries no "tag".

The protein has a calculated MW of 44.6 kDa. The protein migrates as 21 kDa±3 kDa under reducing (R) condition, and 23 kDa and 34 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE).

### Endotoxin

Less than 0.1 EU per µg by the LAL method.

### Host Cell DNA

<0.02 ng/µg of protein tested by qPCR.

### Sterility

Negative

### Mycoplasma

Negative.

### Purity

>95% as determined by SDS-PAGE.

### Formulation

Lyophilized from 0.22 µm filtered solution in 20 mM Citric acid, pH3.0 with trehalose as protectant.

Contact us for customized product form or formulation.

### Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

### Storage

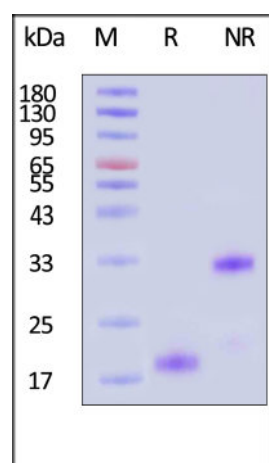
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

### SDS-PAGE



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## Human BMP-4 / BMP2B Protein, premium grade

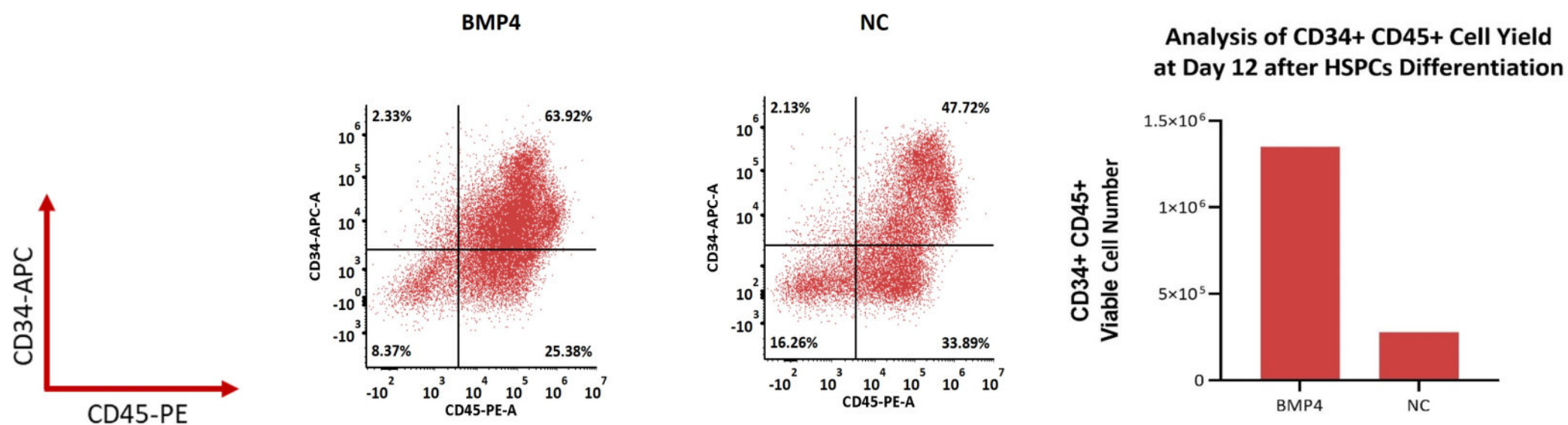
Catalog # BM4-H5317



BIOSYSTEMS  
**Acro**

Human BMP-4 Protein, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

### Application Data



Human BMP-4 Protein, premium grade (Cat. No. BM4-H5317) could significantly induce iPSC derived HSPC differentiation, with high expression of CD34 and CD45 (HSPC markers) by flow cytometry analysis and the increase of viable numbers of CD34+ CD45+ cells by cell counting. NC: H<sub>2</sub>O treatment (Routinely tested).

### Background

Bone Morphogenetic Protein 4 (BMP4) is a member of growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including neurogenesis, vascular development, angiogenesis and osteogenesis. BMP-4 Initiates the canonical BMP signaling cascade by associating with type I receptor BMPRI1A and type II receptor BMPRII2. BMP-4 can acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction.

### Clinical and Translational Updates

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