



Synonym

BMP4,BMP2B,BMP2B1,MCOPS6,OFC11,ZYME

Source

Human BMP-4 (improved sequence) Protein, premium grade (BM4-H5118) is expressed from E. coli cells. It is a variant of BMP-4 to suit cell culture applications better.

Predicted N-terminus: Met

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

This protein carries no "tag".

The protein has a calculated MW of 13.2 kDa. The protein migrates as 12 kDa \pm 3 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE).

Endotoxin

Less than 0.05 EU per μ g by the LAL method.

Host Cell Protein

<0.5 ng/ μ g of protein tested by ELISA.

Host Cell DNA

<0.02 ng/ μ g of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μ m filtered solution in 20 mM Citric acid, pH2.2 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

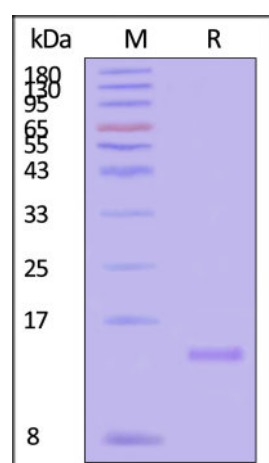
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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



Human BMP-4 (improved sequence) Protein, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The

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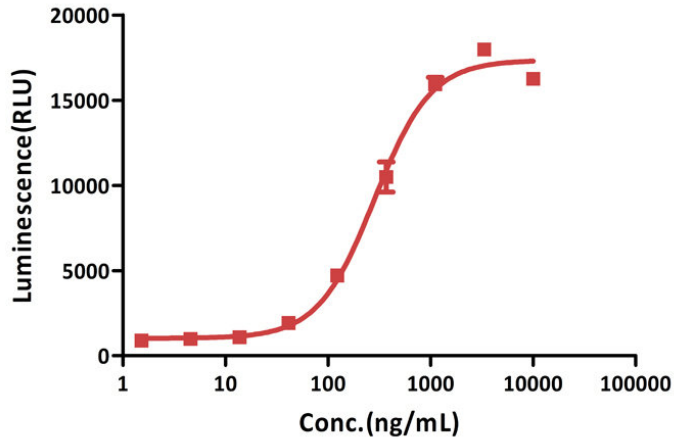




purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

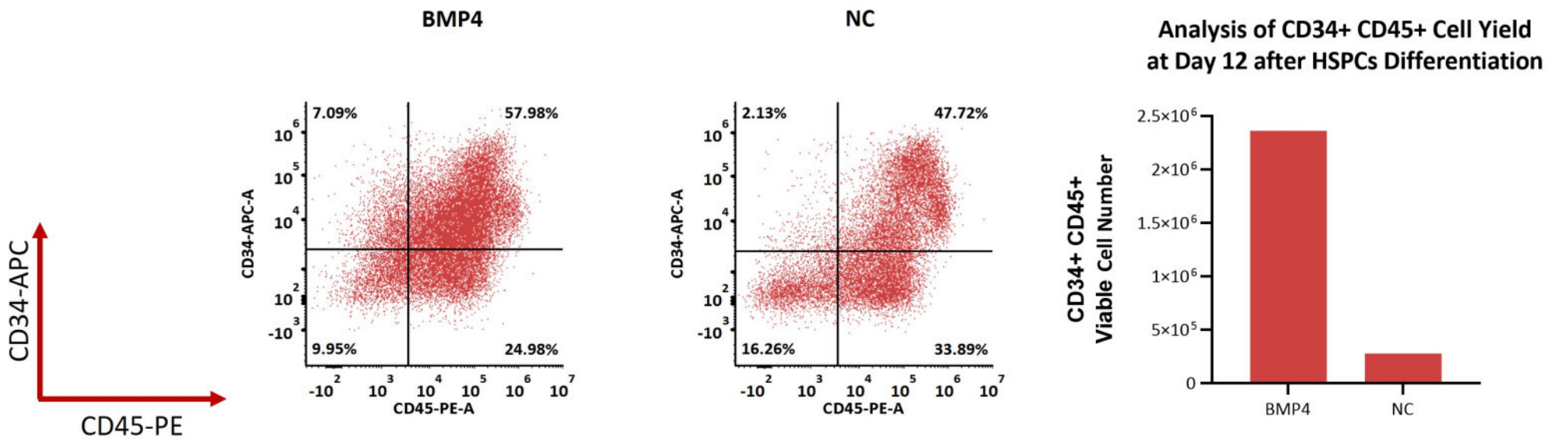
Bioactivity-Bioactivity CELL BASE

Human BMP-4 (improved sequence) Protein, premium grade stimulates proliferation of Human BMP(Luc)HEK 293 Reporter cells

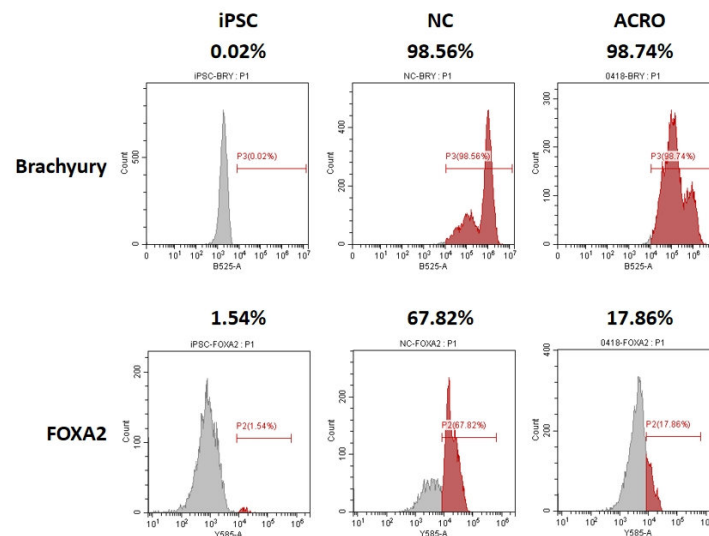


Human BMP-4 (improved sequence) Protein, premium grade (Cat. No. BM4-H5118) stimulates proliferation of Human BMP (Luc) HEK293 Reporter Cell (Cat. No. CHEK-ATF188). The specific activity of Human BMP-4 (improved sequence) Protein, premium grade is $> 1.9 \times 10^3$ U/mg (QC tested).

Application Data



Human BMP-4 (improved sequence) Protein, premium grade (Cat. No. BM4-H5118) 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: H2O treatment (Routinely tested).



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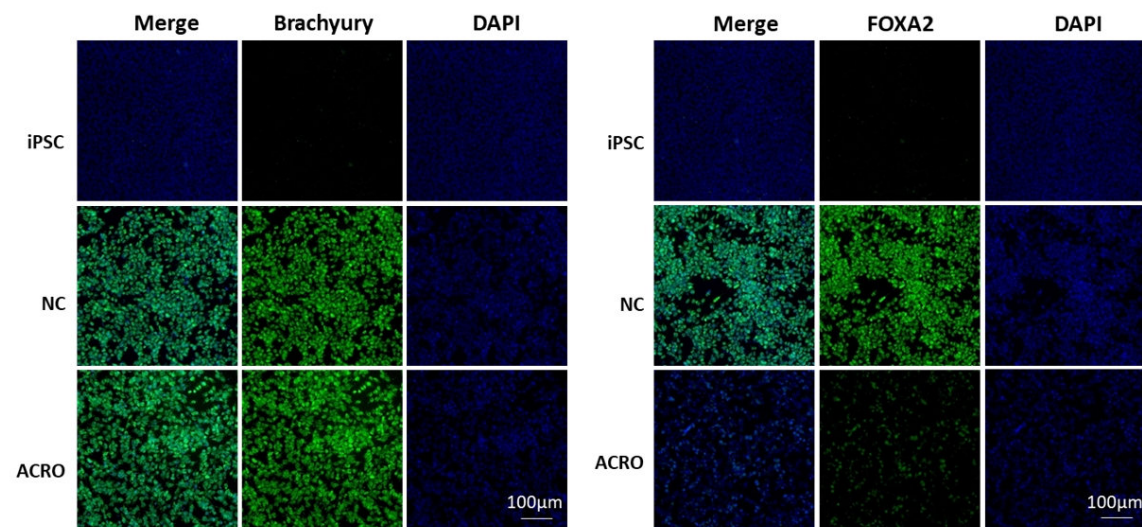
Human BMP-4 / BMP2B (improved sequence) Protein, premium grade

Catalog # BM4-H5118



BIOSYSTEMS
Acro

Human BMP-4 (improved sequence) Protein, premium grade (Cat. No. BM4-H5118) could significantly inhibit endoderm cell marker FOXA2 expression and promote mesoderm cell marker Brachyury expression from iPSC differentiation by FACS analysis. NC: CHIR99021; ACRO: CHIR99021+BMP4 treatment (30 ng/mL) (Routinely tested).



Human BMP-4 (improved sequence) Protein, premium grade (Cat. No. BM4-H5118) could significantly inhibit endoderm cell marker FOXA2 expression and promote mesoderm cell marker Brachyury expression from iPSC differentiation by immunofluorescence staining. NC: CHIR99021; ACRO: CHIR99021+BMP4 treatment (30 ng/mL) (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 BMPR1A and type II receptor BMPR2. 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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