

Recombinant Human/Mouse/Rat mature BMP-2 Protein

Catalog No.: RP02510S Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	650	P12643

Tags

No tag

Synonyms

BDA2;BMP2A;BMP2

Product Information

Source	Purification
E.coli	> 95% by SDS-PAGE.

Calculated MW	Observed MW
12.78 kDa	15-20 kDa

Endotoxin

< 1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of 0.1% TFA, 30% ACN. Contact us for customized product form or formulation.

Reconstitution

Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

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Background

BMP-2 like other bone morphogenetic proteins, plays an important role in the development of bone and cartilage. It is involved in the hedgehog pathway, TGF beta signaling pathway, and in cytokine-cytokine receptor interaction. It is also involved in cardiac cell differentiation and epithelial to mesenchymal transition. Like many other proteins from the BMP family, BMP-2 has been demonstrated to potently induce osteoblast differentiation in a variety of cell types. BMP-2 may be involved in white adipogenesis and may have metabolic effects.

Basic Information

Description

Recombinant Human/Mouse/Rat mature BMP-2 Protein is produced by Escherichia coli expression system. The target protein is expressed with sequence (Ala284-Arg396) of Human/Mouse/Rat BMP-2 (NP_001191.1) fused with no tag.

Bio-Activity

Measured by its ability to induce alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED₅₀ for this effect is 24.59-98.36 ng/mL, corresponding to a specific activity of 1.02×10⁴~4.07×10⁴ units/mg.

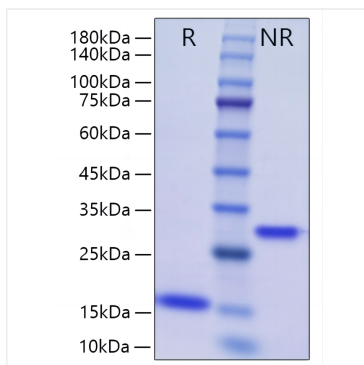
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

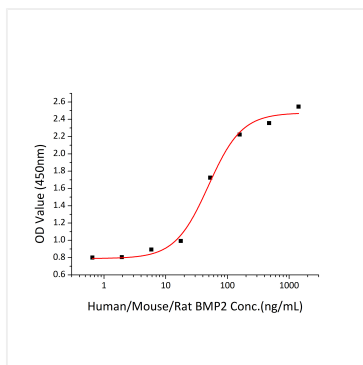
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human/Mouse/Rat mature BMP-2 Protein was resolved with SDS PAGE under reducing (R) and non-reducing (NR) conditions showing single bands at 15-20 kDa and 25-30 kDa, respectively.



Recombinant Human/Mouse/Rat mature BMP-2 Protein induce alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED₅₀ for this effect is 24.59-98.36 ng/mL, corresponding to a specific activity of $1.02 \times 10^4 \sim 4.07 \times 10^4$ units/mg.