

Recombinant Human BMP-5 Protein

Catalog Number: TL-647

Product name

Generic names	Recombinant Human BMP-5 Protein
Gene Name Synonym	Bone Morphogenetic Protein-5

Product information

Construction	A DNA sequence encoding the human BMP-5 (NP_066551.1) was expressed with a polyhistidine tag at the C- terminus.
Source	Human
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE
Bio Activity	Depending on its ability to induce alkaline phosphatase production in ATDC-5 cells, the expected ED ₅₀ effectiveness is 1.0-2.0 µg/ml.
Endotoxin	< 0.1EU per µg of the protein as determined by the LAL method.
Molecular Mass	The recombinant human BMP-5 consists of 376 amino acids and predicts a molecular mass of 42.6 KDa.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % - 8 % trehalose, mannitol are added as protectants before lyophilization.
Stability & Storage	Stable for up to 24 months from date of receipt at 4 °C. Stable for 6-12 months at -20°C after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage and avoid repeated freeze-thaw cycles.

Background

Transforming growth factor- β family members are key regulators of cell proliferation, differentiation, matrix synthesis and apoptosis. As their name implies, BMP family factors initiate, promote and regulate the development, growth and remodeling of bone and cartilage. In addition to this role, BMP family factors are also involved in prenatal and postnatal growth, remodeling and maintaining various other tissues and organs. BMP-5 is expressed in the nervous system, lungs and liver. It is a regulator of the growth of sympathetic neuron dendritic cells. BMP-5 is a precursor protein of 454 amino acids, which is cleaved to release a biologically active C-terminal mature protein.

References

1. Screening of key molecules of HAb18G/CD147 signal transduction pathway in human hepatoma cells. Zhou H, Yao Y, Liang Y, Wang Z, Zhou X, Guo W, Yang X, Jiang J, Sun J, Chen Z. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi. 2017

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2. High serum levels of BMP-2 correlate with BMP-4 and BMP-5 levels and induce reduced neuronal phenotype in patients with relapsing-remitting multiple sclerosis. Penn M, Mausner-Fainberg K, Golan M, Karni A. J Neuroimmunol. 2017 Sep 15;310:120-128. doi:10.1016/j.jneuroim.2017.07.008. Epub 2017 Jul 15.