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Datasheet for ABIN2666463 **BMP5 Protein (AA 317-454)**

Overview

Quantity:	10 µg
Target:	BMP5
Protein Characteristics:	AA 317-454
Origin:	Human
Source:	CHO Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Multiplex Assay (MA)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE and HPLC analysis.
Endotoxin Level:	Less than 0.1 ng per µg of protein.

Target Details

Target:	BMP5
Alternative Name:	BMP-5 (BMP5 Products)
Background:	Bone morphogenetic proteins (BMPs) are multi-functional growth factors that belong to the transforming growth factor beta (TGF-β) superfamily. BMPs play a key role in embryonic development, especially during heart, neural, and cartilage development. Around 20 BMP family members have been identified and characterized. BMPs signal through serine/threonine kinase receptors, composed of type I and II subtypes. Four type I receptors have been identified: type

Target Details

IA and IB BMP receptors, type IA activin receptor, and activin receptor-like kinase I. Three type II receptors have also been recognized: type II BMP receptor and type II and IIB activin receptors. Nervous system development involves several BMPs including BMP-2, 4, 5, and 7. BMP-5 is widely expressed in the nervous system throughout development and into adulthood, and BMP-5 induces multiple dendritic processes to sympathetic neurons in culture. BMP-5 plays an important role in fracture healing during the stage of cartilage formation and periosteal response. In addition, BMP-4 and BMP-5 are expressed in normal synovial tissue and have been found to be decreased in osteoarthritis and rheumatoid arthritis, therefore, it has been speculated that these BMPs are important in joint homeostasis.

Molecular Weight: The 138 amino acid recombinant protein has a predicted molecular mass of approximately 15.6 kDa. Recombinant human BMP-5 is a homodimeric disulfide-linked protein. The predicted N-terminal amino acid is Ala.

Pathways: [Regulation of Hormone Metabolic Process](#), [Regulation of Hormone Biosynthetic Process](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Comment: Biological activity: BMP-5 induces alkaline phosphatase production on ATDC-5 cells. The expected ED₅₀ = 0.5 - 1.0 µg/ml, corresponding to a specific activity of 1.0 - 2.0 x 10³ unit/mg.

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: For maximum results, quick spin vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/mL. Do not vortex. It is recommended to further dilute in a buffer containing a carrier protein such as 0.1 % BSA and store working aliquots at -20 °C to -80 °C.

Buffer: Lyophilized

Handling Advice: Avoid repeated freeze/thaw cycles.

Storage: -20 °C

Storage Comment: Unopened vial can be stored at -20°C or -70°C.