

Recombinant Human BMP-6 (Bone Morphogenetic Protein-6)

Product Description

TGF- β family members are key modulators of cell proliferation, differentiation, matrix synthesis, and apoptosis. As implied by their name, BMPs initiate, promote, and regulate the development, growth, and remodeling of bone and cartilage. In addition to this role, BMPs are also involved in prenatal development and postnatal growth, remodeling, and maintenance of a variety of other tissues and organs. Increasing evidence indicates that BMP-Smad signaling has a tumor suppressing activity, and that BMPs can inhibit tumor growth. BMP-6 is abnormally expressed in breast cancer cell lines, however, its function in promoting breast cancer development is unknown. The mature and functional form of BMP-6 is a homodimer of two identical 139 amino acid polypeptide chains linked by a single disulfide bond. Each monomer is expressed as the C-terminal part of a precursor polypeptide, which contains a 20 amino acid signal peptide and a 354 amino acid propeptide. This precursor undergoes intracellular dimerization, and upon secretion it is processed by a furin-type protease.

Typical Specifications

Species	Human
Expression	HEK293 Cell Expressed
Activity	Typically 0.03-0.06 $\mu\text{g/ml}$ ED ₅₀
Purity	$\geq 95\%$
Endotoxin	< 1.0 EU/ μg
Molecular Mass	26.2 kDa
Formulation	10mM Tris, pH 9.0
Country of Origin	USA

Purity Confirmation

This was determined by SDS-PAGE gel and HPLC analysis.

Activity Assay

Determined by its ability to induce alkaline phosphatase production by ATDC-5 cells.

AA Sequence

VSSASDYNSS	ELKTACRKHE	LYVSFQDLGW
QDWIAPKGY	AANYCDGECG	FPLNAHMNAT
NHAIVQTLVH	LMNPEYVPKP	CCAPTKLNAI
SVLYFDDNSN	VILKKYRNMV	VRACGCH

Reconstitution Buffer

Centrifuge the vial prior to opening.
Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex.

Storage

For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% HSA) and store in working aliquots at -20°C to -80°C .

Limited Use and Restrictions

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