

Recombinant Human Bone Morphogenetic Protein 7

#R00182

Size: 10 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Bone Morphogenetic Protein 7 is one of the BMPs, some of which belong to the TGF-beta superfamily (BMP2-7). There are more than thirteen BMPs have been discovered nowadays and they are involved in inducing cartilage and bone formation. BMP-7 is mainly expressed in kidney and bladder. It is also present in developing eyes, brain and ear during embryogenesis. BMP-7 also named osteogenic protein-1 (OP-1) is a potent osteoinductive cytokine and plays role in osteoblast differentiation, SMAD1 production and renal development and repair. Human BMP-7 is synthesized with a signal sequence (29 a.a.), a propeptide (263 a.a.), and a growth factor domain (139 a.a.). The growth factor domain of human BMP-7 shares 98 % a.a. sequence identity with mouse and rat BMP-7.

AA Sequence

STGSKQRSQNRSKTPKNQEALRMANVAENSSSDQR

QACKKHELYVSFRDLGWQDWIIAPEGYAAYYCEGEC
AFPLNSYMNATNHAIVQTLVHFINPETVPKPCCAPTQL
NAISVLYFDDSSNVILKKYRNMVVRACGCH

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 10 mM HAc to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	OP-1
Accession	P18075
GeneID	655
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 15.7 kDa, a monomeric, non-glycosylated polypeptide chain containing 139 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Applications	1. Molecular standard (Western, ELISA) in studying secreted BMP-7; 2. Preparing antibodies for BMP-7 monomer; 3. Molecule standard in detecting secreted BMP-7 in

	reduced SDS-PAGE.
Biological Activity	Data is not available.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 30 % acetonitrile, 0.1 % TFA.
Endotoxin	Less than 1 EU/µg of rHuBMP-7 as determined by LAL method.