

Recombinant Human BMP-7

Information

Gene ID	655
Accession #	P18075
Alternate Names	OP-1
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 15.7 kDa, a monomeric, non-glycosylated polypeptide chain containing 139 amino acids.
AA Sequence	STGSKQRSQN RSKTPKNQEA LRMANVAENS SSDQRQACKK HELYVSFRDL GWQDWIIAPE GYAAYYCEGE CAFPLNSYMN ATNHAIVQTL VHFINPETVP KPCCAPTQLN AISVLYFDSD SNVILKKYRN MVVRACGCH
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
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.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 30 % acetonitrile, 0.1 % TFA.
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.
Biological Activity	Data is not available.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10 µg	100 µg	500 µg
Recombinant Human BMP-7	10 µg	100 µg	500 µg

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Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/ μ g of rHuBMP-7 as determined by LAL method.

Description

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.

Reference

1. Zeisberg M, Hanai J, Sugimoto H, et al. 2003. Nat Med, 9: 964-8.
2. Phillips FM, Turner AS, Seim HB, 3rd, et al. 2006. Spine J, 6: 500-6.
3. Veerasamy M, Nguyen TQ, Motazed R, et al. 2009. Am J Physiol Renal Physiol, 297: F1238-48.
4. Pauly S, Klatte F, Strobel C, et al. 2012. J Shoulder Elbow Surg, 21: 464-73.



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