

# Recombinant Human Bone Morphogenetic Protein 2 (BMP-2)








Publication Number MAN0003520







Revision Date 06 May 2011

<b>Catalog Number:</b>	PHC7145	PHC7146	PHC7141	PHC7143
<b>Quantity:</b>	10 µg	25 µg	100 µg	1 mg
<b>Lot Number:</b>	See product label.			
<b>Molecular Weight:</b>	26 kDa			
<b>Purity:</b>	>95% as determined by SDS-PAGE analysis.			
<b>Amino Acid Sequence:</b>	QAKHKQRKRL KSSCKRHPLY VDFSDVGWND WIVAPPGYHA FYCHGECPPF LADHLNSTNH AIVQTLVNSV NSKIPKACCV PTELSAISML YLDENEKVVV LKNYQDMVVEG CGCR			
<b>Biological Activity:</b>	ED <sub>50</sub> range = 0.1–1.0 µg/mL (Specific Activity: 1.0 × 10 <sup>4</sup> –1.0 × 10 <sup>3</sup> units/mg), determined by the dose dependent induction of alkaline phosphatase in mouse chondrogenic cell line ATDC52. The optimal concentration for each specific application should be determined by an initial dose response assay.			
<b>Formulation:</b>	Lyophilized, carrier free.			
<b>Sterility:</b>	Filtered prior to lyophilization through a 0.22 micron sterile filter.			
<b>Endotoxin:</b>	<0.1 ng/µg			
<b>Production:</b>	Produced in <i>E. coli</i> and purified by sequential chromatography.			
<b>Reconstitution Recommendation:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute lyophilized recombinant human BMP-2 in sterile 20 mM acetic acid to a concentration of 0.1–1.0 mg/mL. Further dilutions should be made in low endotoxin medium or a buffered solution containing a carrier protein such as heat inactivated FCS or tissue culture grade BSA.			
<b>Suggested Working Dilutions:</b>	The optimal concentration should be determined for each specific application.			
<b>Storage:</b>	Store lyophilized human BMP-2 at 2°C to 8°C, preferably desiccated. Upon reconstitution, apportion into working aliquots and store at ≤ -20°C. Avoid repeated freeze/thaw cycles.			
<b>Expiration Date:</b>	Expires one year from date of receipt when stored as instructed.			
<b>Biological Function:</b>	Human BMP-2 is one of the 15 related BMPs, which are the members of transforming growth factor β (TGF-β) superfamily <sup>1</sup> . BMPs were originally identified as protein regulators of cartilage and bone formation. However, they have since been shown to be involved in embryogenesis and morphogenesis of various tissues and organs. BMPs have also been shown to regulate the growth, differentiation, chemotaxis and apoptosis of various cell types, including mesenchymal cells, epithelial cells, hematopoietic cells and neuronal cells <sup>3</sup> .			
<b>References:</b>	Wozney, J.M., V. Rosen, A.J. Celeste, L.M. Mitscock, M.J. Whitters, R.W. Kriz, R.M. Hewick, and E.A. Wang (1988) Novel Regulators of bone formation: molecular clones and activities. <i>Science</i> 242: 1528–1534. Nakamura, K., T. Shirai, S. Morishita, S. Uchida, K. Saeki-Miura, and F. Makishima (1999) p38 mitogen-activated protein kinase functionally contributes to chondrogenesis induced by growth/differentiation factor-5 in ATDC5 cells. <i>Experimental Cell Research</i> 250: 351–363. Ruppert, R., E. Hoffmann, and W. Sebald (1996) Human bone morphogenetic protein 2 contains a heparin-binding site which modifies its biological activity. <i>Eur. J. Biochem.</i> 237:295–302.			

## Explanation of Symbols

The symbols present on the product label are explained below:

Symbol	Description
	Catalog Number
	Research Use Only
	Use by
	Manufacturer
	Without, does not contain
	Protect from light
	Directs the user to consult instructions for use (IFU), accompanying the product.

Symbol	Description
	Batch code
	In vitro diagnostic medical device
	Temperature limitation
	European Community authorized representative
	With, contains
	Consult accompanying documents

### Limited Use Label License: Research Use Only

The purchase of this product conveys to the purchaser the limited, non-transferable right to use the purchased amount of the product only to perform internal research for the sole benefit of the purchaser. No right to resell this product or any of its components is conveyed expressly, by implication, or by estoppel. This product is for internal research purposes only and is not for use in commercial applications of any kind, including, without limitation, quality control and commercial services such as reporting the results of purchaser's activities for a fee or other form of consideration. For information on obtaining additional rights, please contact [outlicensing@lifetech.com](mailto:outlicensing@lifetech.com) or Out Licensing, Life Technologies, 5791 Van Allen Way, Carlsbad, California 92008.

**For Research Use Only. Caution: Not for human or animal therapeutic or diagnostic use.**

Manufactured under ISO 13485 Quality Standard

Manufacturing site: 7335 Executive Way | Frederick, MD 21704 | Toll Free in USA 800.955.6288

© 2011 Life Technologies Corporation. All rights reserved. The trademarks mentioned herein are the property of Life Technologies Corporation or their respective owners.

For support visit [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support) or email [techsupport@lifetech.com](mailto:techsupport@lifetech.com)

[www.lifetechnologies.com](http://www.lifetechnologies.com)

