

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BMP-8 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) BMP-2, rhBMP-3, rhBMP-4, rhBMP-5, rhBMP-6 and rhBMP-7 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human BMP-8a Ala264-His402 Accession # AAP74559
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

BMP-8, also known as osteogenic protein 2 (OP-2), was first isolated from a hippocampal library in a screen to identify relatives of BMP-7 (OP-1) (1). BMPs are a family of structurally and functionally related proteins and represent a subfamily of the transforming growth factor β (TGF- β) superfamily. BMPs were originally identified as protein regulators of cartilage and bone formation. They have since been shown to be involved in embryogenesis and morphogenesis of various tissues and organs (2). BMPs play roles in regulating growth, differentiation, chemotaxis, and apoptosis of various cell types, including mesenchymal, epithelial, hematopoietic, and neuronal cells.

There exist two highly related and closely linked genes, designated BMP-8a and -8b in mice and humans. For humans, the protein products of these two genes share 98% amino acid (aa) sequence identity in their pro- and mature regions. However in the mouse, the two proteins share 89% and 76% aa sequence homology in their pro- and mature regions, respectively (3). Mature human BMP-8a shares 91% and 70% aa sequence identity with mouse BMP-8a and -8b, respectively. Human BMP-8a is synthesized as a large precursor protein that is cleaved at a dibasic cleavage site (RTPR) between aa residues 263 and 264 to release a 139 aa carboxy-terminal domain. Expression patterns of the BMP-8 genes indicate that they regulate aspects of cell proliferation and/or differentiation during spermatogenesis and formation of the placenta (3). BMP-8 is also highly expressed in osteosarcomas (4).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.