

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BMP-3b/GDF-10 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant human (rh) BMP-3 is observed and less than 2% cross-reactivity with rhBMP-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human BMP-3b/GDF-10 Gln369-Arg478 Accession # Q5VSQ8
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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-3b, also known as GDF-10, belongs to the transforming growth factor β (TGF- β) superfamily which includes the TGF- β s, bone morphogenetic proteins (BMPs), growth differentiation factors (GDFs), Activins, Inhibins, Leftys, Nodal, Mullerian inhibitory substance (MIS) and the glial cell line-derived neurotrophic factors (GDNFs) (1). TGF- β family members are synthesized and secreted as homodimeric or heterodimeric prepropeptides that are cleaved by proprotein convertases such as furin to generate the carboxy-terminal mature dimeric protein that contains the characteristic conserved cysteine residues involved in the formation of the cysteine knot domain. Within pro-BMP-3b, three dibasic cleavage sites have been identified. Mature BMP-3B is a disulfide-linked homodimer of the C-terminal 110 amino acids. Among TGF- β family members, BMP-3b is most closely related to BMP-3, sharing 83% and 30% amino acid sequence identity in their mature and pro regions, respectively (2, 3). BMP-3b is highly conserved across animal species, the aa sequence of mature human BMP-3b is 98% identical with that of the mouse or rat proteins (2, 3). BMP-3b is expressed in developing skeletal structures of the craniofacial region and the vertebral column, as well as in the adult trachea, aorta, and most abundantly in the cerebellum and uterus (2-4). Interestingly, in the knock-out mice, no obvious abnormalities have been found in these tissues (4). The biological function of BMP-3b is yet unknown, however studies have implicated it in the differentiation of osteoblasts, augmenting BMP-2 activity (5, 6).

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.