

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 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 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).

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