Human BMP-5 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 149107

Catalog Number: FAB7151R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BMP-5 in direct ELISAs and Western blots. In direct ELISAs, 50% cross-reactivity with recombinant human (rh) BMP-6 is observed and no cross-reactivity with rhBMP-2, -3, -4, or -7 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 149107
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human BMP-5 Asn313-His454 Accession # P22003
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.*

Neutralization	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

Bone Morphogenetic Protein-5 (BMP-5) is one of at least 15 structurally and functionally related BMPs which are members of the transforming growth factor β (TGF-β) superfamily (1). BMP-5 is synthesized as a 454 amino acid (aa) precursor protein that is cleaved at the dibasic cleavage site (RxxR) to release the 20 kDa C-terminal mature protein (2). Mature BMP-5 contains seven conserved cysteine residues involved in formation of the cysteine knot and the single interchain disulfide bond. Biologically active BMP-5 is a disulfide-linked homodimer of the C-terminal mature protein. Mature human BMP-5 shares 96% aa sequence identity with mouse and rat BMP-5. Cellular responses to BMP-5 are mediated by the formation of hetero-oligomeric complexes of type I and type II serine/threonine kinase receptors (1). BMP-5 is expressed by chondrocytes in proliferating and hypertrophic zones of bone growth plates (3). It contributes to limb development by promoting proliferation and differentiation of chondrocytes as well as apoptosis of undifferentiated mesoderm (3, 4). Genetic defects in BMP-5 which cause C-terminal truncation or loss of the proteolytic cleavage site result in multiple skeletal abnormalities, including the short ear phenotype in mice (5, 6). BMP-5 is also expressed by ovarian granulosa cells where it functions as an autocrine factor to promote GC proliferation and inhibit their production of progesterone (7). In the nervous system, BMP-5 promotes dendrite outgrowth and dopaminergic neuronal differentiation (8, 9). It is upregulated in oral squamous carcinoma cells and induces the apoptosis of some myeloma cell lines (10, 11).

PRODUCT SPECIFIC NOTICES

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Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475