

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BMP-8 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human BMP-2, -3, -4, -5, -6, or -7 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 158708
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human BMP-8 Ala264-His402 Accession # AAP74559
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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.

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 are involved in a wide range of processes including embryogenesis, tissue morphogenesis, cell differentiation and migration, and tumorigenesis. Cellular responses to BMPs are mediated by hetero-oligomeric complexes of type I and type II serine/threonine kinase receptors (2-4). BMP-8a and BMP-8b, produced from separate genes, share 98% aa sequence identity in human but only 74% in mouse within the mature regions. Human BMP-8a is synthesized as a 402 aa precursor protein that is cleaved between Arg263 and Ala264 to release the C-terminal mature protein. Mature human BMP-8a shares 90% and 68% aa sequence identity with mouse mature BMP-8a and -8b, respectively. BMP-8a is expressed during pregnancy in the deciduum and trophoblast cells, by inner root sheath cells of developing hair follicles, and by the epididymis and spermatids (5-7). In the mouse it cooperates with BMP-7 in the maintenance of spermatogenesis but is not required for the initiation of spermatogenesis (7, 8). BMP-8b, in contrast, is required for both the initiation and maintenance of spermatogenesis (9). BMP-8a is induced during osteoblast differentiation at the onset of mineralization and during the osteogenic phase of bone repair in osteoblasts and osteocytes (10-12). BMP-8a/b is also highly expressed in osteosarcomas (13).

PRODUCT SPECIFIC NOTICES

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