

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BMP-1/PCP in direct ELISA.
Source	Monoclonal Rat IgG _{2A} Clone # 264801
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human BMP-1/PCP Ala121-Gln730 Accession # NP_001190
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.

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

Bone morphogenetic protein 1 (BMP-1), also known as procollagen C-proteinase (PCP), is a zinc protease of the astacin family (1, 2). BMP-1/PCP plays a key role in formation of extracellular matrix (ECM) by converting precursor proteins into their mature and functional forms. The precursor proteins identified as substrates for BMP-1/PCP include collagens, biglycan, laminin 5, dentin matrix protein-1, and lysyl oxidase (3). There are six alternatively spliced forms known to be derived from the BMP-1 gene, and isoform 1 consisting of residues 1 to 730 was expressed. The secreted and purified protein does not contain the signal peptide (amino acid residues 1-22) and pro domain (residues 23-120), but contain protease (residues 121-321), CUB I (residues 322-434), CUB II (residues 435-546), EGF-like (residues 547-588) and CUB III (residues 591-703) domains. The pro domain is apparently cleaved by a furin-like proprotein convertase (4). The purified BMP-1/PCP is an active protease and its peptidase activity can be determined as described above. The purified BMP-1/PCP is predicted to possess procollagen C-proteinase activity because it contains the minimal domain structure required (5).

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