Human BMP-1/PCP Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF1927

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BMP-1/PCP in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human BMP-1/PCP Ala121-Gln730 Accession # NP_001190
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human BMP-1/PCP (Catalog # 1927-ZN)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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).

References:

1. Wozney, J.M. *et al.* (1988) Science **242**:1528.
2. Bond, J.S. and R.J. Beynon (1995) Protein Sci. **4**:1247.
3. Steiglitz, B.M. *et al.* (2004) J. Biol. Chem. **279**:980.
4. Leighton, M. and K.E. Kadler (2003) J. Biol. Chem. **278**:18478.
5. Hartigan, N. *et al.* (2003) J. Biol. Chem. **278**:18045.

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