



BMP7, Bone morphogenetic protein 7 polyclonal antibody

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Website: www.allelebiotech.com
Call: 1-800-991-RNAI/858-587-6645
(Pacific Time: 9:00AM~5:00PM)
Email: oligo@allelebiotech.com

Box 1 | Basic Info

Cat. No.	ABP-PAB-01216
Animal ID	RC40104
Host	Chicken
Reactivity	Human
Format	Purified
Accession number	NM_001719
Amount	100µg

Alternative Name(s):

osteogenic protein 1

References:

- Grophe J, Greenwald J, Wiater E, Rodriguez-Leon J, Economides AN, Kwiatkowski W, Affolter M, Vale WW, Belmonte JC, Choe S: Structural basis of BMP signalling inhibition by the cystine knot protein Noggin. *Nature* 420(6916): 636-642 (2002).
- Chubinskaya S, Kumar B, Merrihew C, Heretis K, Rueger DC, Kuettner KE: Age-related changes in cartilage endogenous osteogenic protein-1 (OP-1). *Biochim. Biophys. Acta.* 1588(2): 126-134 (2002).
- Solursh M, Langille RM, Wood J, Sampath TK: Osteogenic protein-1 is required for mammalian eye development. *Biochem. Biophys. Res. Commun.* 218: 438-443 (1996).
- Ozkaynak E, Rueger DC, Drier EA, Corbett C, Ridge RJ, Sampath TK, Oppermann H: OP-1 cDNA encodes an osteogenic protein in the TGF-beta family. *EMBO J.* 9: 2085-2093 (1990).
- Wozney JM, Rosen V, Celeste AJ, Mitscock LM, Whitters MJ, Kriz RW, Hewick RM, Wang EA: Novel regulators of bone formation: molecular clones and activities. *Science* 242(4885): 1528-1534 (1988).

Bone morphogenetic proteins (BMPs) were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskel-etal site. All BMPs except BMP1 are members of the transforming growth factor-beta superfamily of secreted growth and differentiation factors and they signal through bone morphogenetic protein receptors (BMPRs), membrane-bound serine/threonine kinases. BMP proteins are synthesized as prepropeptides, cleaved, and then processed into dimeric proteins. The precise biological role of bone morphogenetic protein 7 (BMP7) is still unknown but it seems to be required for mammalian eye development. Noggin, one of BMP7's physiological inhibitors, inhibits BMP signalling by physically interacting with BMP7 and blocking the molecular interfaces of the binding epitopes for both type I and type II receptors. Age related decline in BMP7 expression may contribute to the elevated susceptibility of cartilage to the degenerative process.

Buffers

Purified chicken polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column and eluted out with both high and low pH buffers and neutralized immediately after elution then followed by dialysis against PBS.

Immunogen

Partial protein comprised of amino acids 1 - 193 of the human bone morphogenetic protein 7 (BMP7) protein.

Application

Tested by peptide-specific ELISA (1:1,000).

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C. Avoid repeated freeze-thaw cycles.