ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Bone Morphogenetic Protein 13 (BMP-13/CDMP2 Antibodies

Cat. # BMP131-S	Rabbit anti-human BMP-13 antiserum	**SIZE**: 100 ul
Cat. # BMP131-C	Recombinant Human BMP-13 Protein control for WB	**SIZE**: 100 ul

The BMPs belong to the TGF- Beta superfamily, whose members are widely represented throughout the animal kingdom. The BMPs are important regulators of key events in the processes of bone formation during embryogenesis, postnatal growth, remodeling and regeneration of the skeleton. The BMPs function by binding to a receptor complex that is found on all normal cells and is composed of type-I and –II receptors. The primary unit of bone formation is osteoblast, the bone-forming cell. These osteoblast cells respond to physical loading by transducing signals that alter gene expression patterns, and Cbfa (core binding factor), the osteoblast specific transcription factor plays an important role in osteoblast differentiation and function.

BMP activities are modulated through gene expression, protein processing and by interaction with antagonists. The interplay between BMPs and their antagonists such as noggin & chordin governs developmental and cellular processes as diverse as establishment of the embryonic dorsal-ventral axis, induction of neuronal tissue, and formation of joints in the skeletal system and the neurogenesis in the adult brain.

Localization studies in both human and mouse tissues have demonstrated high levels of mRNA expression and protein synthesis for various BMPs in kidney, heart, lung, small intestine, limb bud and teeth. Several BMPs have been implicated in early skeletal development, including BMP-2, -4, -5, -7, -14 (CDMP-1 / GDF-5), other members, such as BMP-3, -6, -7 and –13 (CDMP-2 / GDF-6) may be involved in later stages of skeletal formation.

Source of Antibodies and Protein controls

Antigen	Recombinant purified Human **BMP-13/CDMP-2** protein (Cat # BMP131-R-10)
Ab Host/type	Rabbit, polyclonal unpurified antiserum (**cat # BMP131-S)**
2ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Recombinant Human BMP-13/CDMP-2/GDF-6 is a 13.5 kDa homodimeric disulfide-linked protein consisting of 120 amino acids. It was expressed in E. coli ad purified to >95%. Human BMP131-C protein for Western blot +ve control (**Cat # BMP131-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **BMP131**-C for good visibility with antibody Cat # **BMP131**-S. Store at –20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **BMP131**-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Do not freeze, thaw, or hear repeatedly

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: No tested.

Specificity & Cross-reactivity

Antibody # BMP131-S reacts with human BMP1. Antibody cross-reactivity in various species has not been studied. Recombinant purified human BMP1 protein (Cat# BMP12-C) is available for Western as control.

General References: Chang, S. C et al (1994) JBC Vol. 269 (45), 28227-28234; Paralkar V. M et al (1998) JBC 273 (22) 13760-13767; Tomaski SM et al (1999) Arch Otolaryngol Head Neck Surg. 125 (8) 901-906.

*This product is for in vitro research use only.

Related material available from ADI

BMP 1-8, CDMP –1, -2 antibodies and recombinant proteins.

Human BMP-7 ELISA kit

BMP131-S-C 71215S

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com