

Mouse Monoclonal Antibody to Human BMP-2



Catalog Number: 10426-MM14

General Information	
Immunogen:	Recombinant Human BMP-2 protein (Catalog#10426-HNAE)
Clone ID:	7D10G8E2
Ig Type:	Mouse IgG2b
Applications:	WB, ELISA
Specificity:	Human BMP-2
Formulation:	0.2 µm filtered solution in PBS with 5% trehalose
Storage:	< -20° C

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Human BMP-2 (rh BMP-2; Catalog#10426-HNAE; NP_001191.1; Gln 283-Arg 396). The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography.

Applications

Western blot – This antibody can be used at 1-2 µg/mL with the appropriate secondary reagents to detect Human BMP2 in WB. Using a DAB detection system, the detection limit for Human BMP2 is approximately 2 ng/lane under non-reducing conditions and 4 ng/lane under reducing conditions.

Direct ELISA – This antibody can be used at 0.5-1 µg/mL with the appropriate secondary reagents to detect Human BMP2. The detection limit for Human BMP2 is approximately 0.078 ng/well.

Specificity

Human BMP-2

No cross-reactivity in ELISA with

Human BMP5

Human cell lysate (293 cell line)

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -70°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

Background

Bone morphogenetic protein 2 (BMP2) is a member of the BMP subgroup belonging to the transforming growth factor (TGF)-beta superfamily. The mature BMP2 acts as disulfide-linked homodimers and heterodimers with BMP-7 after proteolytic removal of propeptide. BMP2 is capable of inducing the formation of cartilage and bone but are now regarded as multifunctional cytokines. It binds heterodimeric receptor complexes composed of a type I receptor and a type II receptor, and transduces the related signals via the down-stream molecules, such as the PI3 kinase, Smads, STATs, etc. BMP2 has been demonstrated to potently induce osteoblast differentiation in a variety of cell types, and induce apoptosis in human myeloma cell lines as a novel function. In addition, recent studies have revealed that osteoblast-derived BMP2 enhances the migration of prostate cancer cells. rhBMP2 can be utilized in various therapeutic interventions such as bony defects, delayed union, non-union fractures and osteoporosis.

Reference

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Fax :+86-10-51029969 • Tel:+86-400-890-9989 • <http://www.sinobiological.com>