

BMP6 (Precursor Specific) (D2V5Z) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	55-65	Rabbit IgG	#P22004	654

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

BMP6 (Precursor Specific) (D2V5Z) Rabbit mAb recognizes endogenous levels of total precursor BMP6 protein. This antibody does not recognize mature BMP6 protein. This antibody also recognizes an unknown protein with a 26 kDa molecular weight.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gln173 of human BMP6 protein.

Background

Bone morphogenetic proteins (BMPs) were first identified as molecules that can induce ectopic bone and cartilage formation (1,2). BMPs belong to the TGF- β superfamily, playing many diverse functions during development (3). BMPs are synthesized as precursor proteins and then processed by cleavage to release the C-terminal mature BMP. BMPs initiate signaling by binding to a receptor complex containing type I and type II serine/threonine receptor kinases that then phosphorylate Smad (mainly Smad1, 5, and 8), resulting in the translocation of Smad into the nucleus. BMP was also reported to activate MAPK pathways in some systems (3,4). BMP6 plays a critical role in iron metabolism, ovulation, and aldosterone production (5-7). Recent studies have shown that hypermethylation of the BMP6 gene promoter decreases its expression in several cancer types, which contributes to tumor growth and progression (8-11).

Background References

1. Wang, E.A. et al. (1988) *Proc Natl Acad Sci USA* 85, 9484-8.
2. Wozney, J.M. et al. (1988) *Science* 242, 1528-34.
3. Kawabata, M. et al. (1998) *Cytokine Growth Factor Rev* 9, 49-61.
4. Nohe, A. et al. (2004) *Cell Signal* 16, 291-9.
5. Roth, M.P. and Coppin, H. (2009) *Med Sci (Paris)* 25, 678-80.
6. Inagaki, K. et al. (2006) *Endocrinology* 147, 2681-9.
7. Akiyama, I. et al. (2014) *Reprod Sci* 21, 772-7.
8. Hashida, Y. et al. (2012) *Oncol Rep* 27, 825-30.
9. Liu, G. et al. (2014) *Oncol Rep* 32, 581-8.
10. He, Y. et al. (2014) *PLoS One* 9, e87994.
11. Sangplod, P. et al. (2014) *Asian Pac J Cancer Prev* 15, 7091-5.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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