Product Name: BMP4 (16W18) Rabbit Monoclonal Antibody
Catalog #: AMRe07598

Summary

Production Name	BMP4 (16W18) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Purification	Affinity purification

Immunogen

Gene Name	BMP4
Alternative Names	BMP-2B; BMP-4; BMP2B; BMP2B1; bone morphogenetic protein 4; DVR4; ZYME
Gene ID	652.0
SwissProt ID	P12644.A synthetic peptide of human BMP4

Application

Dilution Ratio	WB: 1:2000-1:10000
Molecular Weight	47kDa

Background

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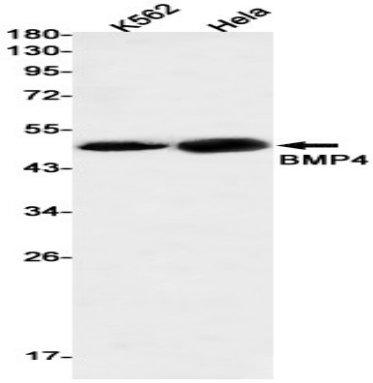
Bone morphogenetic proteins (BMPs) were first identified as molecules that can induce ectopic bone and cartilage formation. BMPs belongs to the TGF-β superfamily, playing many diverse functions during development. BMPs are synthesized as precursor proteins and then processed by cleavage to release the 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 the translocation of Smad into the nucleus. BMP was also reported to activate MAPK pathways in some systems. Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including neurogenesis, vascular development, angiogenesis and osteogenesis (PubMed:31363885). Acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction (By similarity). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2 (PubMed:25868050, PubMed:8006002). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A. In turn, BMPR1A propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes (PubMed:25868050, PubMed:29212066). Can also signal through non-canonical BMP pathways such as ERK/MAP kinase, PI3K/Akt, or SRC cascades (PubMed:31363885). For example, induces SRC phosphorylation which, in turn, activates VEGFR2, leading to an angiogenic response (PubMed:31363885).

Research Area

Image Data



Western blot detection of BMP4 in K562,Hela cell lysates using BMP4 antibody(1:500 diluted).

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Note

For research use only.