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BMPR1B Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2005B

Product Information

Application	WB, IHC-P, E
Primary Accession	O00238
Other Accession	P36898, Q05438, NP_001194
Reactivity	Human
Predicted	Chicken, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	56930
Antigen Region	472-502

Additional Information

Gene ID	658
Other Names	Bone morphogenetic protein receptor type-1B, BMP type-1B receptor, BMPR-1B, CDw293, BMPR1B
Target/Specificity	This BMPR1B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 472-502 amino acids from the C-terminal region of human BMPR1B.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	BMPR1B Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BMPR1B
Function	On ligand binding, forms a receptor complex consisting of two type II and two type I transmembrane serine/threonine kinases. Type II receptors phosphorylate and activate type I receptors which autophosphorylate, then

	bind and activate SMAD transcriptional regulators. Receptor for BMP7/OP-1 and GDF5. Positively regulates chondrocyte differentiation through GDF5 interaction.
Cellular Location	Cell membrane; Single-pass type I membrane protein

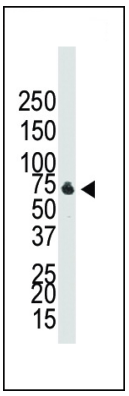
Background

The bone morphogenetic protein (BMP) receptors are a family of transmembrane serine/threonine kinases that include the type I receptors BMPR1A and BMPR1B and the type II receptor BMPR2. These receptors are also closely related to the activin receptors, ACVR1 and ACVR2. The ligands of these receptors are members of the TGF-beta superfamily. TGF-betas and activins transduce their signals through the formation of heteromeric complexes with 2 different types of serine (threonine) kinase receptors: type I receptors of about 50-55 kD and type II receptors of about 70-80 kD. Type II receptors bind ligands in the absence of type I receptors, but they require their respective type I receptors for signaling, whereas type I receptors require their respective type II receptors for ligand binding.

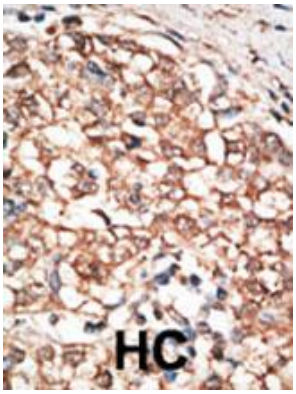
References

Kan, L. et al. Stem Cells.January; 27(1): 150?56(2009).
Lehmann, K., et al., Proc. Natl. Acad. Sci. U.S.A. 100(21):12277-12282 (2003).
Astrom, A.K., et al., Mamm. Genome 10(3):299-302 (1999).
Ide, H., et al., Oncogene 14(11):1377-1382 (1997).
ten Dijke, P., et al., Science 264(5155):101-104 (1994).
Ide, H., et al., Cytogenet. Cell Genet. 81 (3-4), 285-286 (1998).

Images



Western blot analysis of anti-BMPR1B Pab (Cat. #ap2005b) in NCI-H460 cell lysate. BMPR1B (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- BMP signaling induces astrocytic differentiation of clinically derived oligodendroglioma propagating cells.
- Growth differentiation factor 9 is a germ cell regulator of Sertoli cell function.
- Dysregulation of local stem/progenitor cells as a common cellular mechanism for heterotopic ossification.