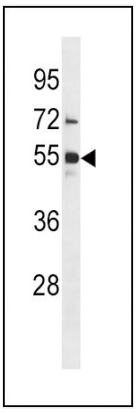
ACVR1 Antibody – Rabbit Polyclonal

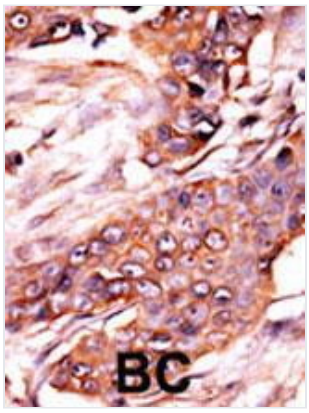
PRODUCT OVERVIEW

Product Name	ACVR1, Polyclonal Antibody
Full Product Name	ACVR1, NT (Activin Receptor Type 1, Activin Receptor Type I, ACTR-I, Serine/Threonine-protein Kinase Receptor R1, SKR1, Activin Receptor-like Kinase 2, ALK-2, TGF-B Superfamily Receptor Type I, TSR-I, ACVRLK2) (MaxLight 490)
Product Gene Name	anti-ACVR1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight490.
Purity/Purification	Purified by Ammonium Sulfate Precipitation
Specificity	Recognizes human ACVR1. Species Crossreactivity: mouse
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight490 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
OMIM	gene 135100
3D Structure	ModBase 3D Structure for Q04771
Immunogen	KLH-conjugated synthetic peptide mapping to a fragment of residues within amino acids aa20-50 in the N-terminal region of human ACVR1, UniProt Accession #NP_001096; Q04771
Conjugate	MaxLight490
Note	Preservative Free
Product Categories/Family for anti-ACVR1 antibody	Antibodies; Activin Receptors
Applications Tested/Suitable for anti-ACVR1 antibody	Immunohistochemistry (IHC), FLISA, Western Blot (WB)
Application Notes for anti-ACVR1 antibody	IHC: 1:50-1:100 FLISA: 1:1000 WB: 1:100-1:500 Applications are based on unconjugated antibody.
Related Product Information for anti-ACVR1 antibody	MBS6461384 is an antibody targeting ACVR1. Also known as ACVR1, NT (Activin Receptor Type 1, Activin Receptor Type I, ACTR-I, Serine/Threonine-protein Kinase Receptor R1, SKR1, Activin Receptor-like Kinase 2, ALK-2, TGF-B Superfamily Receptor Type I, TSR-I, ACVRLK2) (MaxLight 490). Reactive in Human, Mouse. Host: Rabbit.
Product References and Citations for anti-ACVR1 antibody	1. Casagrandi, D., et al., Mol. Hum. Reprod. 9(4):199-203 (2003). 2. Welt, C.K., Curr Opin Obstet Gynecol 14(3):317-323 (2002). 3. Schneider-Kolsky, M.E., et al., Placenta 23(4):294-302 (2002). 4. Chapman, S.C., et al., Mol. Endocrinol. 15(4):668-679 (2001). 5. Schulte, K.M., et al., Horm. Metab. Res. 32(10):390-400 (2000).

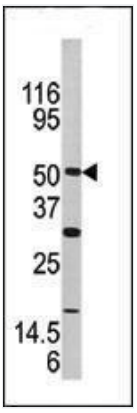
Other Notes	Small volumes of anti-ACVR1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-ACVR1 antibody
ACVR1 Antibody (N-term) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the ACVR1 antibody detected the ACVR1 protein (arrow).



Immunohistochemistry (IHC) of anti-ACVR1 antibody
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Western Blot (WB) of anti-ACVR1 antibody
Western blot analysis of anti-ACVR1 Pab in mouse brain tissue lysate.ACVR1(arrow) was detected using the purified Pab.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACVR1. It may not necessarily be applicable to this product.

NCBI GI #	4501895
NCBI GeneID	90
NCBI Accession #	NP_001096
UniProt Primary Accession #	Q04771
UniProt Related Accession #	Q04771
GenBank Nucleotide #	NP_001096.1
NCBI Official Full Name	activin receptor type-1
NCBI Official Synonym Full Names	activin A receptor type 1
NCBI Official Symbol	ACVR1
NCBI Official Synonym Symbols	FOP; ALK2; SKR1; TSRI; ACTRI; ACVR1A; ACVRLK2
UniProt Protein Name	Activin receptor type-1

UniProt Synonym Protein Names	Activin receptor type I; ACTR-I; Activin receptor-like kinase 2; ALK-2; Serine/threonine-protein kinase receptor R1; SKR1; TGF-B superfamily receptor type I; TSR-I
Protein Family	Activin receptor
UniProt Gene Name	ACVR1
UniProt Synonym Gene Names	ACVRLK2; ACTR-I; ALK-2; SKR1; TSR-I
UniProt Entry Name	ACVR1_HUMAN
NCBI Protein Information	activin receptor type-1
NCBI Summary for ACVR1	Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. Activins signal through a heteromeric complex of receptor serine kinases which include at least two type I (I and IB) and two type II (II and IIB) receptors. These receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine specificity. Type I receptors are essential for signaling; and type II receptors are required for binding ligands and for expression of type I receptors. Type I and II receptors form a stable complex after ligand binding, resulting in phosphorylation of type I receptors by type II receptors. This gene encodes activin A type I receptor which signals a particular transcriptional response in concert with activin type II receptors. Mutations in this gene are associated with fibrodysplasia ossificans progressive. [provided by RefSeq, Jul 2008]
UniProt Comments for ACVR1	ALK2: 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 activin. May be involved for left-right pattern formation during embryogenesis. Interacts with FKBP1A. Interacts with FCHO1. Expressed in normal parenchymal cells, endothelial cells, fibroblasts and tumor-derived epithelial cells. Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily. Protein type: Membrane protein, integral; Kinase, protein; EC 2.7.11.30; Protein kinase, Ser/Thr (receptor); Protein kinase, TKL; TKL group; STKR family; Type1 subfamily Chromosomal Location of Human Ortholog: 2q23-q24 Cellular Component: apical part of cell; integral to plasma membrane; activin receptor complex Molecular Function: protein homodimerization activity; metal ion binding; peptide hormone binding; transmembrane receptor protein serine/threonine kinase activity; protein kinase activity; protein serine/threonine kinase activity; protein binding; activin receptor activity, type I; transforming growth factor beta receptor activity, type I; transforming growth factor beta binding; activin binding; SMAD binding; ATP binding; receptor signaling protein serine/threonine kinase activity Biological Process: pharyngeal system development; in utero embryonic development; positive regulation of transcription, DNA-dependent; peptidyl-threonine phosphorylation; activin receptor signaling pathway; gastrulation with mouth forming second; positive regulation of bone mineralization; protein amino acid phosphorylation; germ cell development; negative regulation of signal transduction; BMP signaling pathway; patterning of blood vessels; positive regulation of osteoblast differentiation; negative regulation of activin receptor signaling pathway; mesoderm formation; transforming growth factor beta receptor signaling pathway; positive regulation of transcription from RNA polymerase II promoter; smooth muscle cell differentiation; regulation of skeletal muscle development; determination of left/right symmetry; regulation of ossification; neural crest cell migration; acute inflammatory response; urogenital system development; G1/S transition of mitotic cell cycle Disease: Fibrodysplasia Ossificans Progressiva
Research Articles on ACVR1	**1.** These findings suggest that the PSMD14-ALK2 axis plays an essential role in initiation of the BMP6 signaling pathway and contributes to tumorigenesis and chemoresistance of colorectal cancers.
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