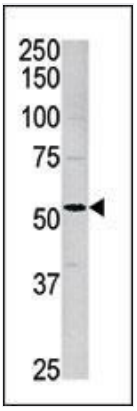
# ACVR1 Antibody – Rabbit Polyclonal

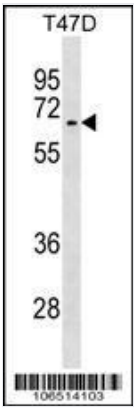
## PRODUCT OVERVIEW

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| **Product Name** | ACVR1, Polyclonal Antibody |
| **Full Product Name** | ACVR1, ID (N99) (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) |
| **Product Gene Name** | anti-ACVR1 antibody |
| **Product Synonym Names** | Anti -ACVR1, ID (N99) (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) |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human, Mouse |
| **Form/Format** | Supplied as a liquid in PBS, 0.09% sodium azide. |
| **Purity/Purification** | Purified<br>Purified by ammonium sulfate precipitation. |
| **Specificity** | Recognizes human ACVR1. Species Crossreactivity: mouse. |
| **Preparation and Storage** | May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. |
| **Molecular Weight** | 57,153 Da |
| **Chromosome Location** | Chromosome: 2; NC_000002.11 (158592958..158732374, complement). Location: 2q23-q24 |
| **OMIM** | 102576 |
| **3D Structure** | ModBase 3D Structure for Q04771 |
| **Immunogen** | Synthetic peptide selected from the center region of human ACVR1 (KLH). |
| **Product Categories/Family for anti-ACVR1 antibody** | Antibodies; Abs to Activin Receptors |
| **Applications Tested/Suitable for anti-ACVR1 antibody** | ELISA (EL/EIA), Western Blot (WB) |
| **Application Notes for anti-ACVR1 antibody** | Suitable for use in ELISA and Western Blot.<br>Dilution: ELISA: 1:1,000<br>Western Blot: 1:100-1:500 |
| **Related Product Information for anti-ACVR1 antibody** | 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. ACVR1 is an activin A type I receptor which signals a particular transcriptional response in concert with activin type II receptors. |

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| **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. |
| **Searchable Terms for ACVR1 purchase** | MBS629570 is an antibody targeting ACVR1. Also known as ACVR1, ID (N99) (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). Reactive in Human, Mouse. Host: Rabbit. |




**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.




**Western Blot (WB) of anti-ACVR1 antibody**
ACVR1 Antibody (N-term) western blot analysis in T47D cell line lysates (35ug/lane).This demonstrates the ACVR1 antibody detected the ACVR1 protein (arrow).

## ADDITIONAL DETAILS

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

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| **NCBI GI #** | 166235898 |
| **NCBI GeneID** | 90 |
| **NCBI Accession #** | NP_001104537.1 |
| **UniProt Primary Accession #** | Q04771 |
| **UniProt Related Accession #** | Q04771; Q53SF4; Q53SV1 |
| **GenBank Nucleotide #** | NM_001111067.2 |
| **NCBI Official Full Name** | activin receptor type-1 |
| **NCBI Official Synonym Full Names** | activin A receptor, type I |
| **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 |
| **Protein Family** | Activin receptor |
| **UniProt Gene Name** | ACVR1 |
| **UniProt Synonym Gene Names** | ACVRLK2 |
| **UniProt Entry Name** | ACVR1_HUMAN |
| **NCBI Protein Information** | activin receptor type-1; OTTHUMP00000162806; OTTHUMP00000204626; OTTHUMP00000240120; activin receptor type I; hydroxyalkyl-protein kinase; activin receptor-like kinase 2; TGF-B superfamily receptor type I; activin A receptor, type II-like kinase 2; serine/threonine-protein kinase receptor R1 |

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| **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] |
| **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.<br><br>Protein type: Protein kinase, TKL; EC 2.7.11.30; Membrane protein, integral; Protein kinase, Ser/Thr (receptor); Kinase, protein; TKL group; STKR family; Type1 subfamily<br><br>Chromosomal Location of Human Ortholog: 2q23-q24<br><br>Cellular Component: apical part of cell; integral to plasma membrane; activin receptor complex<br><br>Molecular Function: protein homodimerization activity; peptide hormone binding; metal ion 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 binding; transforming growth factor beta receptor activity, type I; activin binding; SMAD binding; ATP binding; receptor signaling protein serine/threonine kinase activity<br><br>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; regulation of skeletal muscle development; smooth muscle cell differentiation; positive regulation of transcription from RNA polymerase II promoter; 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<br><br>Disease: Fibrodysplasia Ossificans Progressiva |
| **Research Articles on ACVR1** | **1.** These data indicate that in the context of a Down's syndrome background, ALK2-mediated reduction of BMP signaling may contribute to congenital heart defects. |
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