ACVR2A Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ACVR2A, Polyclonal Antibody
Full Product Name	Anti-ACVR2A Antibody, Rabbit Polyclonal
Product Gene Name	anti-ACVR2A antibody
Product Synonym Names	ACVR2A Antibody, Rabbit PAb, Antigen Affinity Purified; activin A receptor, type IIA; Anti-ACTRII Antibody; Anti-ACVR2 Antibody
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid; 0.2um filtered solution in PBS
Purity/Purification	Protein A & Antigen Affinity
Specificity	Human ACVR2A
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.
Molecular Weight	45,713 Da
OMIM	102581
3D Structure	ModBase 3D Structure for P27037
Immunogen	Recombinant Human ACVR2A Protein
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with purified, recombinant Human ACVR2A (rh ACVR2A). ACVR2A specific IgG was purified by Human ACVR2A affinity chromatography.
Applications Tested/Suitable for anti-ACVR2A antibody	ELISA (EIA)
Application Notes for anti-ACVR2A antibody	ELISA: 1:5000-1:10,000
Related Product Information for anti-ACVR2A antibody	ACVR2A and ACVR2B are two activin type II receptors. ACVR2A has been shown to interact with INHBA, SYNJ2BP and ACVR1B. The bovine ACVR2A gene encodes a protein of 513 amino acids which is highly homologous (approximately 98% identity) to the rat, mouse, and human ACVR2A proteins. Inactivation of ACVR2A is a common event in prostate cancer cells suggesting it may play an important role in the development of prostate cancer. The ACVR2A gene is a putative tumor suppressor gene that is frequently mutated in microsatellite-unstable colon cancers (MSI-H colon cancers). Frameshift mutation of ACVR2A may contribute to MSI-H colon tumorigenesis via disruption of alternate TGF-beta effector pathways.

Product References and Citations for anti-ACVR2A antibody	Albertson RC, et al. (2005) Zebrafish acvr2a and acvr2b exhibit distinct roles in craniofacial development. Developmental dynamics 233(4): 1405-18.Chung H, et al. (2008) Mutation rates of TGFBR2 and ACVR2 coding microsatellites in human cells with defective DNA mismatch repair. PloS one 3(10): e3463.Fitzpatrick E, et al. (2009) Genetic association of the activin A receptor gene (ACVR2A) and pre-eclampsia. Molecular human reproduction 15(3):195-204.Roten LT, et al. (2009) Association between the candidate susceptibility gene ACVR2A on chromosome 2q22 and pre-eclampsia in a large Norwegian population-based study (the HUNT study). EJHG. 17(2): 250-7.
Other Notes	Small volumes of anti-ACVR2A 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 ACVR2A purchase	MBS8101991 is an antibody targeting ACVR2A. Also known as Anti-ACVR2A Antibody, Rabbit Polyclonal. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACVR2A. It may not necessarily be applicable to this product.

NCBI GI #	4501897
NCBI GeneID	92
NCBI Accession #	NP_001607.1
UniProt Primary Accession #	P27037
UniProt Secondary Accession #	Q53TH4; Q6NWV2; Q92474; B2RAB8; B4DWQ2; D3DP85
UniProt Related Accession #	P27037
GenBank Nucleotide #	NM_001616.4
NCBI Official Full Name	activin receptor type-2A isoform 1
NCBI Official Synonym Full Names	activin A receptor, type IIA
NCBI Official Symbol	ACVR2A
NCBI Official Synonym Symbols	ACVR2; ACTRII
UniProt Protein Name	Activin receptor type-2A
UniProt Synonym Protein Names	Activin receptor type IIA
Protein Family	Activin receptor
UniProt Gene Name	ACVR2A
UniProt Synonym Gene Names	ACVR2; ACTR-IIA; ACTRIIA
UniProt Entry Name	AVR2A_HUMAN
NCBI Protein Information	activin receptor type-2A
NCBI Summary for ACVR2A	This gene encodes a receptor that mediates the functions of activins, which are members of the transforming growth factor-beta (TGF-beta) superfamily involved in diverse biological processes. The encoded protein is a transmembrane serine-threonine kinase receptor which mediates signaling by forming heterodimeric complexes with various combinations of type I and type II receptors and ligands in a cell-specific manner. The encoded type II receptor is primarily involved in ligand-binding and includes an extracellular ligand-binding domain, a transmembrane domain and a cytoplasmic serine-threonine kinase domain. This gene may be associated with susceptibility to preeclampsia, a pregnancy-related disease which can result in maternal and fetal morbidity and mortality. Alternative splicing results in multiple transcript variants of this gene. [provided by RefSeq, Jun 2013]

UniProt Comments for ACVR2A	ACVR2A: a tyrosine-kinase like receptor kinase of the STKR family. The holoreceptor receptor is 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. Each is composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic kinase domain. 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. Type II receptor kinases are apparently constitutively active. Protein type: EC 2.7.11.30; Protein kinase, TKL; Kinase, protein; Motility/polarity/chemotaxis; Membrane protein, integral; Protein kinase, Ser/Thr (receptor); TKL group; STKR family; Type2 subfamily Chromosomal Location of Human Ortholog: 2q22.3 Cellular Component: cell surface; integral to plasma membrane; cytoplasm; plasma membrane; receptor complex Molecular Function: activin receptor activity; protein self-association; metal ion binding; transmembrane receptor protein serine/threonine kinase activity; PDZ domain binding; transforming growth factor beta receptor activity; protein serine/threonine kinase activity; protein binding; growth factor binding; activin binding; coreceptor activity; ATP binding; receptor signaling protein serine/threonine kinase activity Biological Process: positive regulation of erythrocyte differentiation; embryonic skeletal development; regulation of BMP signaling pathway; activin receptor signaling pathway; Sertoli cell proliferation; gastrulation with mouth forming second; positive regulation of bone mineralization; protein amino acid phosphorylation; BMP signaling pathway; anterior/posterior pattern formation; positive regulation of osteoblast differentiation; positive regulation of activin receptor signaling pathway; transmembrane receptor protein serine/threonine kinase signaling pathway; mesoderm development; spermatogenesis; regulation of nitric-oxide synthase activity; sperm ejaculation; positive regulation of protein amino acid phosphorylation; determination of left/right symmetry; penile erection
Research Articles on ACVR2A	**1.** For ACVR2A SNPs (rs10497025, rs1128919, rs13430086), no statistically significant difference was found between preeclampsia and control groups in terms of genotype and allele frequencies.
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