

ACVR2A cell lysate

Human ACVR2A HEK293 Overexpression Lysate

CATALOG # AAA257375	HOST HEK293 Cells	APPLICATIONS Western Blot
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PRODUCT SYNONYMS

ACVR2A; Human ACVR2A HEK293 Overexpression Lysate; Human ACVR2/ACTRII/ACVR2A HEK293 Cell Lysate (WB positive control); activin A receptor; type IIA; Human ACTRII Overexpression Lysate; Human ACVR2 Overexpression Lysate; ACVR2A cell lysate

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Form/Format	1x Sample Buffer (1x modified RIPA buffer+1x SDS loading buffer). Modified RIPA Lysis Buffer: 50 mM Tris-HCl pH 7.4, 150 mM NaCl, 1mM EDTA, 1% Triton X-100, 0.1% SDS, 1% Sodium deoxycholate, 1mM PMSF.
Sequence Positions	352aa
Sequence	Met1-Pro13 4
Applicable Applications for ACVR2A cell lysate	WB (Western Blot)
Species	Human
Recommend Usage	1. Centrifuge the tube for a few seconds and ensure the pellet at the bottom of the tube. 2. Re-dissolve the pellet using 200uL pure water and boil for 2-5 min.
Sequence Construction	A DNA sequence encoding the N-terminal segment (Met 1-Pro 134) from the extracellular domain of human ACVR2A (NP_001607.1) was fused with the Fc region of human IgG1 at the C-terminus.
Preparation Method	Cell lysate was prepared by homogenization of the over-expressed cells in ice-cold modified RIPA Lysis Buffer with cocktail of protease inhibitors. Cell debris was removed by centrifugation. Protein concentration was determined by Bradford assay (protein assay, Microplate Standard assay). The cell lysate was boiled for 5 min in 1 x SDS loading buffer (50mM Tris-HCl pH 6.8, 12.5% glycerol, 1% sodium dodecylsulfate, 0.01% bromophenol blue) containing 5% b-mercaptoethanol, and lyophilized.
Preparation and Storage	Store at 4 degree C for up to twelve months from date of receipt. After re-dissolution, aliquot and store at -80 degree C for up to twelve months. Avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt.

ADDITIONAL INFORMATION

Related Product Information for ACVR2A cell lysate	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. This Human ACVR2A overexpression lysate was created in HEK293 Cells and intended for use as a Western blot (WB) positive control. Purification of ACVR2A protein from the overexpression lysate was verified.
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References	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 TGFB2 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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4501897
NCBI GeneID	92
NCBI Accession #	NP_001607.1
NCBI GenBank Nucleotide #	NM_001616.4
UniProt Accession #	P27037; Q53TH4; Q6NWW2; Q92474; B2RAB8; B4DWQ2; D3DP85
Molecular Weight	45,713 Da
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
NCBI Protein Information	activin receptor type-2A
UniProt Protein Name	Activin receptor type-2A
UniProt Gene Name	ACVR2A
UniProt Synonym Gene Names	ACVR2; ACTR-IIA; ACTRIIA
UniProt Entry Name	AVR2A_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.