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ACVR1

Purified Mouse Monoclonal Antibody
Catalog # AO2574a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q04771
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2E2C11
Isotype	Mouse IgG1
Calculated MW	57153
Immunogen	Purified recombinant fragment of human ACVR1 (AA: 21-120) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	90
Other Names	FOP; ALK2; SKR1; TSRI; ACTRI; ACVR1A; ACVRLK2
Dilution	WB~~ 1/500 - 1/2000 IHC~~1:100~500 ICC~~ 1/200 - 1/1000 E~~ 1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ACVR1 is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ACVR1
Synonyms	ACVRLK2
Function	Bone morphogenetic protein (BMP) type I receptor that is involved in a wide variety of biological processes, including bone, heart, cartilage, nervous, and reproductive system development and regulation (PubMed:20628059, PubMed:22977237). As a type I receptor, forms heterotetrameric receptor complexes with the type II receptors AMHR2, ACVR2A or ACVR2B (PubMed:17911401). Upon binding of ligands such as BMP7 or GDF2/BMP9 to the heteromeric complexes, type II receptors transphosphorylate ACVR1

intracellular domain (PubMed:25354296). In turn, ACVR1 kinase domain is activated and subsequently phosphorylates SMAD1/5/8 proteins that transduce the signal (PubMed:9748228). In addition to its role in mediating BMP pathway-specific signaling, suppresses TGFbeta/activin pathway signaling by interfering with the binding of activin to its type II receptor (PubMed:17911401). Besides canonical SMAD signaling, can activate non-canonical pathways such as p38 mitogen-activated protein kinases/MAPKs (By similarity). May promote the expression of HAMP, potentially via its interaction with BMP6 (By similarity).

Cellular Location Membrane; Single-pass type I membrane protein.

Tissue Location Expressed in normal parenchymal cells, endothelial cells, fibroblasts and tumor-derived epithelial cells

References

1.Indian J Pediatr. 2014 Jun;81(6):617-9.2.Nat Genet. 2014 May;46(5):457-61.

Images

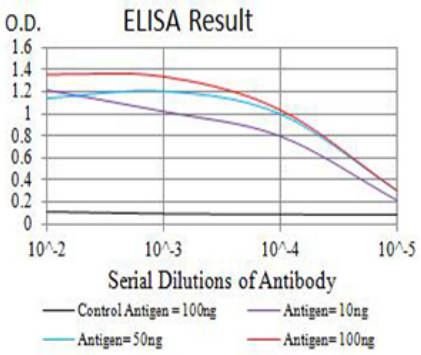


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

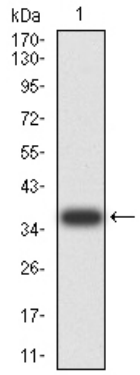
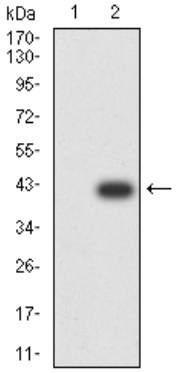


Figure 2:Western blot analysis using ACVR1 mAb against human ACVR1 (AA: 21-120) recombinant protein. (Expected MW is 37.1 kDa)

Figure 3:Western blot analysis using ACVR1 mAb against HEK293 (1) and ACVR1 (AA: 21-120)-hIgGFc transfected HEK293 (2) cell lysate.



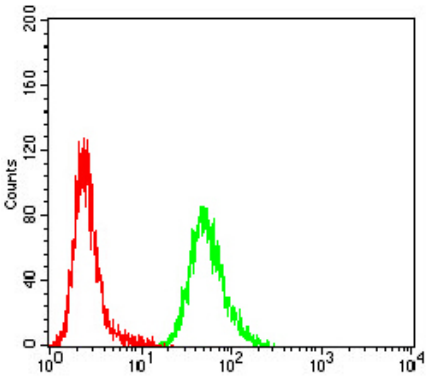


Figure 6:Flow cytometric analysis of Hela cells using ACVR1 mouse mAb (green) and negative control (red).

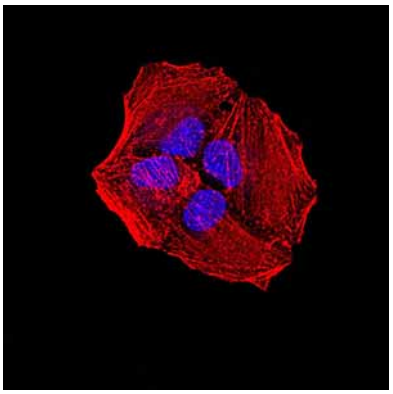


Figure 4:Immunofluorescence analysis of Hela cells using ACVR1 mouse mAb. Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

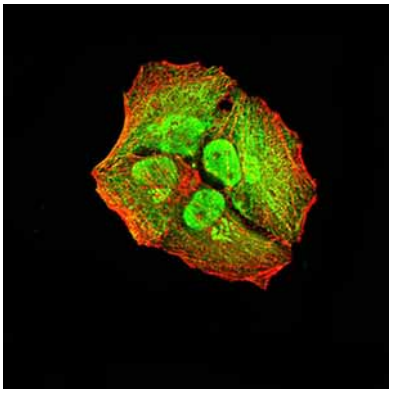


Figure 5:Immunofluorescence analysis of Hela cells using ACVR1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher (Cat#: 35503)

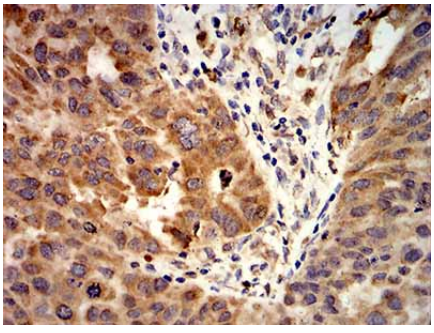


Figure 7:Immunohistochemical analysis of paraffin-embedded ovarian cancer tissues using ACVR1 mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.