

**Anti-ACVR1 Rabbit Monoclonal Antibody**  
**Catalog # ABO16020****Specification**

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**Anti-ACVR1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, IP
Primary Accession	<a href="#">Q04771</a>
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

**Description**

Anti-ACVR1 Rabbit Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human, Mouse, Rat.

**Anti-ACVR1 Rabbit Monoclonal Antibody - Additional Information**

**Gene ID** 90

**Other Names**

Activin receptor type-1, 2.7.11.30, 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, ACVR1, ACVRLK2

**Calculated MW**

57 kDa KDa

**Application Details**

WB 1:500-1:2000<br>IP 1:50

**Contents**

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

**Immunogen**

A synthesized peptide derived from human ACVR1

**Purification**

Affinity-chromatography

**Storage**

**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

**Anti-ACVR1 Rabbit Monoclonal Antibody - 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:<a href="http://www.uniprot.org/citations/20628059" target="\_blank">20628059</a>, PubMed:<a href="http://www.uniprot.org/citations/22977237" target="\_blank">22977237</a>). As a type I receptor, forms heterotetrameric receptor complexes with the type II receptors AMHR2, ACVR2A or ACVR2B (PubMed:<a href="http://www.uniprot.org/citations/17911401" target="\_blank">17911401</a>). Upon binding of ligands such as BMP7 or GDF2/BMP9 to the heteromeric complexes, type II receptors transphosphorylate ACVR1 intracellular domain (PubMed:<a href="http://www.uniprot.org/citations/25354296" target="\_blank">25354296</a>). In turn, ACVR1 kinase domain is activated and subsequently phosphorylates SMAD1/5/8 proteins that transduce the signal (PubMed:<a href="http://www.uniprot.org/citations/9748228" target="\_blank">9748228</a>). 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:<a href="http://www.uniprot.org/citations/17911401" target="\_blank">17911401</a>). 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

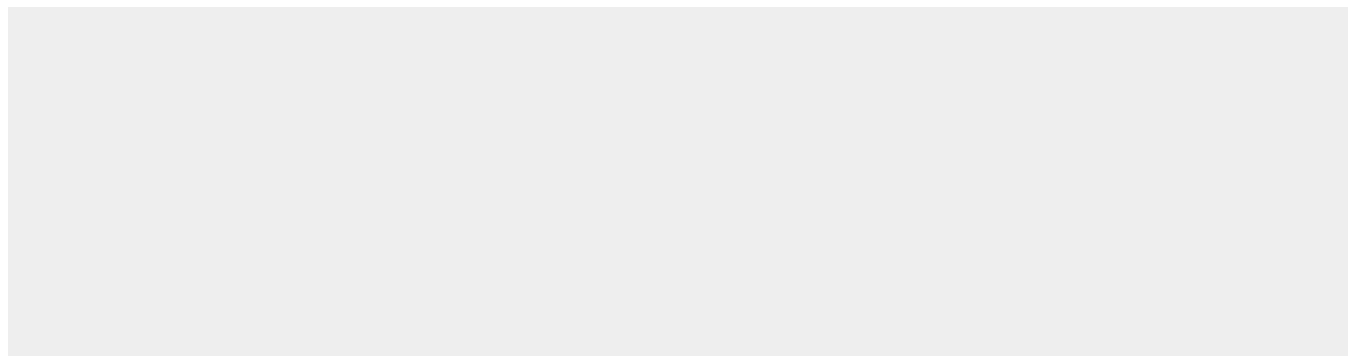
Expressed in normal parenchymal cells, endothelial cells, fibroblasts and tumor-derived epithelial cells

## Anti-ACVR1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-ACVR1 Rabbit Monoclonal Antibody - Images



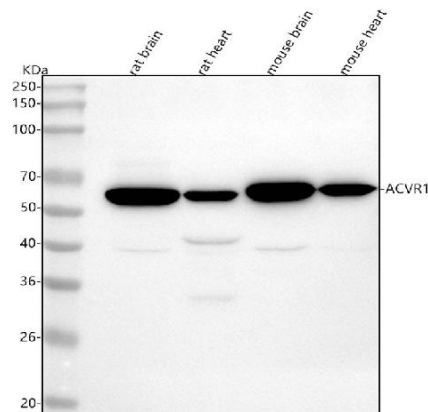


Figure 1. Western blot analysis of ACVR1 using anti-ACVR1 antibody (M00798).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: rat brain tissue lysates,

Lane 2: rat heart tissue lysates,

Lane 3: mouse brain tissue lysates,

Lane 4: mouse heart tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ACVR1 antigen affinity purified monoclonal antibody (Catalog # M00798) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for ACVR1 at approximately 57 kDa. The expected band size for ACVR1 is at 57 kDa.