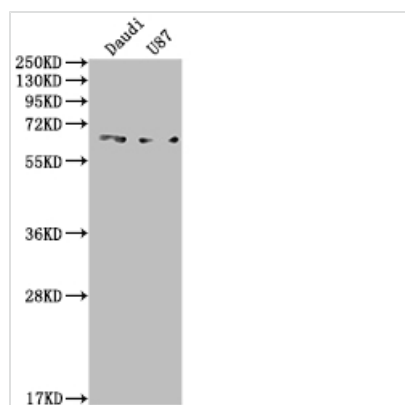




# ACVRL1 Recombinant Monoclonal Antibody

<b>Product Code</b>	CSB-RA555022A0HU
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	P37023
<b>Immunogen</b>	A synthesized peptide derived from human ACVRL1
<b>Species Reactivity</b>	Human
<b>Tested Applications</b>	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
<b>Relevance</b>	Type I receptor for TGF-beta family ligands BMP9/GDF2 and BMP10 and important regulator of normal blood vessel development. 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. May bind activin as well.
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated
<b>Storage Buffer</b>	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Rabbit IgG
<b>Clonality</b>	Monoclonal
<b>Product Type</b>	Recombinant Antibody
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Research Area</b>	Cancer; Cardiovascular; Metabolism; Signal transduction
<b>Gene Names</b>	ACVRL1
<b>Clone No.</b>	8B6

## Image



### Western Blot

Positive WB detected in: Daudi whole cell lysate, U87 whole cell lysate

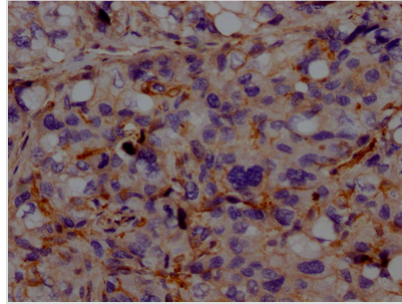
All lanes: ACVRL1 antibody at 1:2000

Secondary

Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 57 kDa

Observed band size: 65 kDa



IHC image of CSB-RA555022A0HU diluted at 1:100 and staining in paraffin-embedded human liver cancer performed on a Leica Bond<sup>TM</sup> system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

## Description

The ACVRL1 recombinant monoclonal antibody is a valuable tool for detecting human ACVRL1 protein in ELISA, WB, and IHC applications, which is produced using recombinant DNA technology. To produce the ACVRL1 recombinant monoclonal antibody, the cDNA of the ACVRL1 antibody-producing hybridomas is sequenced, and the gene coding for the ACVRL1 antibody is synthesized. The hybridomas are generated by fusing myeloma cells with B cells that are extracted from animals immunized with a synthesized peptide derived from human ACVRL1. The synthesized gene is then inserted into a vector, which is subsequently transfected into cells for cultivation. Finally, the ACVRL1 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography.

The ACVRL1 protein, also known as ALK1 (activin receptor-like kinase 1), is a type I cell-surface receptor for the TGF-beta superfamily of signaling proteins. It is mainly expressed in endothelial cells and plays a critical role in the development and maintenance of the cardiovascular system. In particular, ACVRL1 regulates the proliferation, migration, and differentiation of endothelial cells, as well as the recruitment and activation of smooth muscle cells and pericytes. It also plays a role in the maintenance of vascular homeostasis and angiogenesis. Mutations in the ACVRL1 gene have been associated with hereditary hemorrhagic telangiectasia (HHT).