

Mouse Acvr1 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP13796c**Specification**

Mouse Acvr1 Antibody (Center) Blocking peptide - Product InformationPrimary Accession [P37172](#)**Mouse Acvr1 Antibody (Center) Blocking peptide - Additional Information****Gene ID** 11477**Other Names**

Activin receptor type-1, Activin receptor type I, ACTR-I, Serine/threonine-protein kinase receptor R1, SKR1, TGF-B superfamily receptor type I, TSR-I, TSK-7L, Acvr1, Acvrlk2, Tgfb1

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP13796c was selected from the Center region of Mouse Acvr1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Acvr1 Antibody (Center) Blocking peptide - Protein Information**Name** Acvr1**Synonyms** Acvrlk2, Tgfb1**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: [10479450](http://www.uniprot.org/citations/10479450), PubMed: [15531373](http://www.uniprot.org/citations/15531373), PubMed: [21945937](http://www.uniprot.org/citations/21945937)). As a type I receptor, forms heterotetrameric receptor complexes with the type II receptors AMHR2, ACVR2A ors ACVR2B. Upon binding of ligands such as BMP7 or BMP9 to the heteromeric complexes, type II receptors transphosphorylate ACVR1 intracellular domain. In turn, ACVR1 kinase domain is activated and subsequently phosphorylates SMAD1/5/8 proteins that transduce the signal. 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. Besides canonical SMAD signaling, can activate non-canonical pathways such as p38 mitogen-activated protein kinases/MAPKs (By similarity) (PubMed:10479450, PubMed:15531373, PubMed:21945937, PubMed:25413979). May promote the expression of HAMP, potentially via its interaction with BMP6 (PubMed:31800957).

Cellular Location

Membrane; Single-pass type I membrane protein.

Tissue Location

Highly expressed in bone during developmental stages (PubMed:21945937). Expressed in normal parenchymal cells, endothelial cells, fibroblasts and tumor-derived epithelial cells

Mouse Acvr1 Antibody (Center) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

Mouse Acvr1 Antibody (Center) Blocking peptide - Images

Mouse Acvr1 Antibody (Center) Blocking peptide - Background

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. Receptor for activin. May be involved in left-right pattern formation during embryogenesis.

Mouse Acvr1 Antibody (Center) Blocking peptide - References

Luo, J., et al. J. Biol. Chem. 285(38):29588-29598(2010) Song, G.A., et al. J. Biol. Chem. 285(29):22542-22553(2010) Shimogori, T., et al. Nat. Neurosci. 13(6):767-775(2010) Suzuki, Y., et al. J. Cell. Sci. 123 (PT 10), 1684-1692 (2010) :Caronia, G., et al. J. Neurosci. 30(18):6291-6301(2010)