

Mouse Acvr1b Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP14605c**Specification**

Mouse Acvr1b Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [Q61271](#)**Mouse Acvr1b Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 11479**Other Names**

Activin receptor type-1B, Activin receptor type IB, ACTR-IB, Activin receptor-like kinase 4, ALK-4, Serine/threonine-protein kinase receptor R2, SKR2, Acvr1b, Alk4

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 Acvr1b Antibody (Center) Blocking Peptide - Protein Information**Name** Acvr1b**Synonyms** Alk4**Function**

Transmembrane serine/threonine kinase activin type-1 receptor forming an activin receptor complex with activin receptor type-2 (ACVR2A or ACVR2B). Transduces the activin signal from the cell surface to the cytoplasm and is thus regulating a many physiological and pathological processes including neuronal differentiation and neuronal survival, hair follicle development and cycling, FSH production by the pituitary gland, wound healing, extracellular matrix production, immunosuppression and carcinogenesis. Activin is also thought to have a paracrine or autocrine role in follicular development in the ovary. Within the receptor complex, type-2 receptors (ACVR2A and/or ACVR2B) act as a primary activin receptors whereas the type-1 receptors like ACVR1B act as downstream transducers of activin signals. Activin binds to type-2 receptor at the plasma membrane and activates its serine- threonine kinase. The activated receptor type-2 then phosphorylates and activates the type-1 receptor such as ACVR1B. Once activated, the type- 1 receptor binds and phosphorylates the SMAD proteins SMAD2 and SMAD3, on serine residues of the C-terminal tail. Soon after their association with the activin receptor and subsequent phosphorylation, SMAD2 and SMAD3 are released into the cytoplasm where they interact with the common partner SMAD4. This SMAD complex translocates into the nucleus where it mediates

activin-induced transcription. Inhibitory SMAD7, which is recruited to ACVR1B through FKBP1A, can prevent the association of SMAD2 and SMAD3 with the activin receptor complex, thereby blocking the activin signal. Activin signal transduction is also antagonized by the binding to the receptor of inhibin-B via the IGSF1 inhibin coreceptor. ACVR1B also phosphorylates TDP2.

Cellular Location

Cell membrane; Single-pass type I membrane protein

Mouse Acvr1b Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

Mouse Acvr1b Antibody (Center) Blocking Peptide - Images**Mouse Acvr1b 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. Phosphorylates TDP2.

Mouse Acvr1b Antibody (Center) Blocking Peptide - References

Natale, D.R., et al. Dev. Biol. 335(1):120-131(2009) Mizuno, Y., et al. FEBS Lett. 583(13):2263-2268(2009) Carvalho, R.L., et al. J. Cell. Sci. 120 (PT 24), 4269-4277 (2007) :Esguerra, C.V., et al. Development 134(24):4381-4393(2007) Oki, S., et al. Development 134(21):3893-3904(2007)