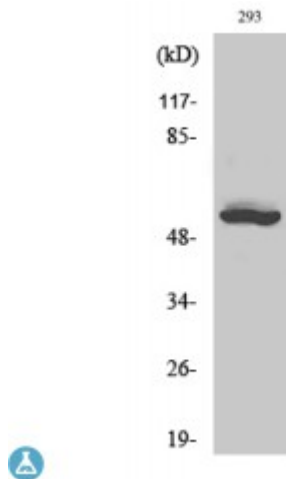


Anti-ACTR-IB antibody



Description	Rabbit polyclonal to ACTR-IB.
Model	STJ91471
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human ACTR-IB
Immunogen Region	50-130 aa, Internal
Gene ID	91
Gene Symbol	ACVR1B
Dilution range	WB 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:5000
Specificity	ACTR-IB Polyclonal Antibody detects endogenous levels of ACTR-IB protein.
Tissue Specificity	Expressed in many tissues, most strongly in kidney, pancreas, brain, lung, and liver.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Activin receptor type-1B Activin receptor type IB ACTR-IB Activin receptor-like kinase 4 ALK-4 Serine/threonine-protein kinase receptor R2 SKR2
Molecular Weight	56 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:172OMIM:601300
Alternative 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
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.
Sequence and Domain Family	The GS domain is a 30-amino-acid sequence adjacent to the N-terminal boundary of the kinase domain and highly conserved in all other known type-1 receptors but not in type-2 receptors. The GS domain is the site of activation through phosphorylation by the II receptors.
Cellular Localization	Cell membrane
Post-translational Modifications	Autophosphorylated. Phosphorylated by activin receptor type-2 (ACVR2A or ACVR2B) in response to activin-binding at serine and threonine residues in the GS domain. Phosphorylation of ACVR1B by activin receptor type-2 regulates association with SMAD7. Ubiquitinated. Level of ubiquitination is regulated by the SMAD7-SMURF1 complex.; Ubiquitinated.

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