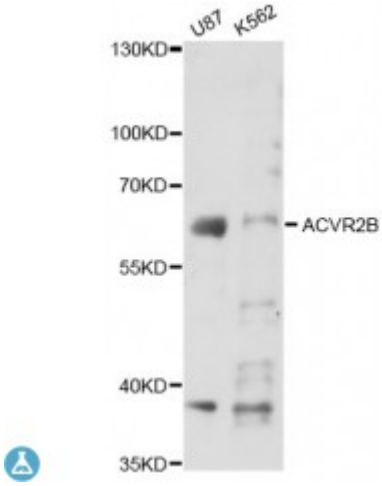
Anti-ACVR2B Antibody



Description	Activins are dimeric growth and differentiation factors which belong to the transforming growth factor-beta (TGF-beta) superfamily of structurally related signaling proteins. Activins signal through a heteromeric complex of receptor serine kinases which include at least two type I (I and IB) and two type II (II and IIB) receptors. These receptors are all transmembrane proteins, composed of a ligand-binding extracellular domain with cysteine-rich region, a transmembrane domain, and a cytoplasmic domain with predicted serine/threonine specificity. Type I receptors are essential for signaling; and type II receptors are required for binding ligands and for expression of type I receptors. Type I and II receptors form a stable complex after ligand binding, resulting in phosphorylation of type I receptors by type II receptors. Type II receptors are considered to be constitutively active kinases. This gene encodes activin A type IIB receptor, which displays a 3- to 4-fold higher affinity for the ligand than activin A type II receptor.

Model	STJ117842
Host	Rabbit
Reactivity	Human
Applications	IF, WB
Immunogen	A synthetic peptide corresponding to a sequence within amino acids 50-150 of human ACVR2B (NP_001097.2).
Gene ID	93
Gene Symbol	ACVR2B
Dilution range	WB 1:500 - 1:2000

	IF 1:50 - 1:200
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Activin receptor type-2B
Molecular Weight	57.724 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:174OMIM:602730Reactome:R-HSA-1181150
Alternative Names	Activin receptor type-2B
Function	Transmembrane serine/threonine kinase activin type-2 receptor forming an activin receptor complex with activin type-1 serine/threonine kinase receptors (ACVR1, ACVR1B or ACVR1c), Transduces the activin signal from the cell surface to the cytoplasm and is thus regulating 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, the type-2 receptors act as a primary activin receptors (binds activin-A/INHBA, activin-B/INHBB as well as inhibin-A/INHA-INHBA), 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, 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,
Cellular Localization	Cell membrane
Post-translational Modifications	Phosphorylated, Constitutive phosphorylation is in part catalyzed by its own kinase activity,