

Anti-ACVR1B / ALK4 Antibody (Internal)

Rabbit Anti Human Polyclonal Antibody

Catalog # ALS18261

Product Information

Application	WB, IHC-P
Primary Accession	P36896
Predicted	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	56807
Concentration (mg/ml)	1 mg/ml

Additional Information

Gene ID	91
Alias Symbol	ACVR1B
Other Names	ACVR1B, ACTR-IB, ACTRIB, ALK4, Activin receptor type IB, Activin A Receptor Type IB, Activin A receptor, type IB, Activin receptor-like kinase 4, ACVRLK4, ALK-4, Activin receptor type-1B, SKR2-2, SKR2
Target/Specificity	Recognizes endogenous levels of ACVR1B protein.
Reconstitution & Storage	Immunoaffinity purified
Precautions	Anti-ACVR1B / ALK4 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ACVR1B
Synonyms	ACVRLK4, 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

Tissue Location

Expressed in many tissues, most strongly in kidney, pancreas, brain, lung, and liver

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.