

Activin Receptor Type-2B (ACVR2B) Active Protein | ACVR2B active protein

Recombinant Human Activin Receptor Type-2B (ACVR2B), Partial

CATALOG #
AAA235620

HOST
Mammalian Cell

PRODUCT SYNONYMS

Activin Receptor Type-2B (ACVR2B); Recombinant Human Activin Receptor Type-2B (ACVR2B); Partial; Activin Receptor Type-2B; Activin Receptor Type IIB; ACTR-IIB; ACVR2B; ACVR2B active protein

PRODUCT SPECIFICATIONS

Host	Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized from a 0.2 mum Filtered 20 mM PB, 150 mM NaCl, pH 7.4
Sequence Positions	19-134aa; partial
Sequence	SGRGEAETRE CIYYNANWEL ERTNQSGLER CEQEQDKRLH CYASWRNSSG TIELVKKGCW LDDFNCYDRQ ECVATEENPQ VYFCCCEGNF CNERFTHLPE AGGPEVTYEP PPTAPT
Species	Human
Tag	C-terminal 6xHis-FC-tagged
Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
Biological Activity	The ED50 as determined by its ability to bind Human Activin A in functional ELISA is less than 100 ng/ml.
Subcellular Location	Cell Membrane, Single-Pass Type I Membrane Protein
Protein Families	Protein Kinase Superfamily, TKL Ser/Thr protein Kinase Family, TGFB Receptor Subfamily
Classification	Other Recombinant Protein
Pathway	TGF-beta Signaling Pathway
Preparation and Storage	Store at -20 degree C. For extended storage, conserve at -20 degree C or -80 degree C. Repeated freezing and thawing is not recommended. Store working aliquots at 4 degree C for up to one week.

ADDITIONAL INFORMATION

Related Product Information for ACVR2B active protein	Relevance: Activin proteins that belong to the transforming growth factor-beta (TGF-beta) superfamily, exert their biological actions by binding to heteromeric receptor complexes of type I and type II serine/threonine kinase receptors. On ligand binding, type I and II receptors form a stable complex, resulting in phosphorylation of type I receptors by type II receptors with constitutive kinase activity, and subsequently initiates the activation of downstream molecules including the endogenous Smads. ActRIIB, also known as ActRIIB, is a type II receptor containing an extracellular domain (ECD), a transmembrane segment, and a cytoplasmic region that includes the kinase domain. ActRIIB is a receptor for activin A, activin B and inhibin A. Multiple ActRIIB isoforms can also be generated, which bind activin isoforms with different affinities. 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/INHBA-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.
Product Categories/Family for ACVR2B active protein	Signal Transduction

NCBI AND UNIPROT INFORMATION

NCBI GI #	116734708
NCBI GeneID	93
NCBI Accession #	NP_001097.2
NCBI GenBank Nucleotide #	NM_001106.4
UniProt Accession #	Q13705
Molecular Weight	41.3 kDa
NCBI Official Full Name	activin receptor type-2B
NCBI Official Synonym Full Names	activin A receptor type 2B
NCBI Official Symbol	ACVR2B
NCBI Official Synonym Symbols	HTX4; ACTRIIB; ActR-IIB
NCBI Protein Information	activin receptor type-2B
UniProt Protein Name	Activin receptor type-2B
UniProt Gene Name	ACVR2B
UniProt Synonym Gene Names	ACTR-IIB
UniProt Entry Name	AVR2B_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

