

ALK4/ACVR1B Active Protein | ACVR1B active protein

ALK4/ACVR1B Protein, Human, Recombinant (His Tag)

CATALOG #
AAA257899

HOST
HEK293 Cells

PRODUCT SYNONYMS

ALK4/ACVR1B; ALK4/ACVR1B Protein; Human; Recombinant (His Tag); Human ALK4/ACVR1B Protein (His Tag); ACTR1B Protein; ACVRLK4 Protein; ALK4 Protein; SKR2 Protein; activin A receptor; type IB; ACVR1B active protein

PRODUCT SPECIFICATIONS

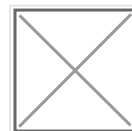
Host	HEK293 Cells
Purity/Purification	>92% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-Glu126
Species	Human
Activity	Measured by its binding ability in a functional ELISA. Immobilized human TDGF1 at 2ug/ml (100uL/well) can bind human ALK-4 with a linear range of 0.032-4ug/ml.
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Ser 24
Tag	C-His
Protein Construction	A DNA sequence encoding the human ACVR1B (NP_004293.1) extracellular domain (Met 1-Glu 126) was expressed, with a C-terminal polyhistidine tag.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.

IMAGES



Application Data

Measured by its binding ability in a functional ELISA. Immobilized human TDGF1 at 2 ug/ml (100 ul/well) can bind human ALK-4 with a linear range of 0.032-4 ug/ml.



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for ACVR1B active protein	Background: ALK-4 (Activin Receptor-Like Kinase 4) or ACVR1B (Activin A Receptor, type 1B), belongs to the protein kinase superfamily, TKL Ser/Thr protein kinase family, and TGFB receptor subfamily. ALK-4/ACVR1B acts as a transducer of activin or activin like ligands signals. Activin binds to either ACVR2A or ACVR2B and then forms a complex with ACVR1B. The known type II activin receptors include ActRII and ActRIIB, while the main type I activin receptor in mammalian cells is ALK-4 (ActRIB). In the presence of activin, type II and type I receptors form complexes whereby the type II receptors activate ALK-4 through phosphorylation. The activated ALK-4, in turn, transduces signals downstream by phosphorylation of its effectors, such as Smads, to regulate gene expression and affect cellular phenotype. ALK-4/ACVR1B is an important regulator of vertebrate development, with roles in mesoderm induction, primitive streak formation, gastrulation, dorsoanterior patterning, and left-right axis determination.
References	Chen Y, et al. (2005) Developmental analysis of activin-like kinase receptor-4 (ALK4) expression in Xenopus laevis. 232(2): 393-8.J. Massagu. (1998) TGF- SIGNAL TRANSDUCTION. Annual Review of Biochemistry. 67: 753-91.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4757720
NCBI GeneID	91
NCBI Accession #	NP_004293.1
NCBI GenBank Nucleotide #	NM_004302.4
UniProt Accession #	P36896; Q15479; Q15480; Q15481; Q15482; B7Z5L8; B7Z5W5
Molecular Weight	56,807 Da
NCBI Official Full Name	activin receptor type-1B isoform a
NCBI Official Synonym Full Names	activin A receptor, type IB
NCBI Official Symbol	ACVR1B
NCBI Official Synonym Symbols	ALK4; SKR2; ACTRIB; ACVRLK4
NCBI Protein Information	activin receptor type-1B; activin receptor-like kinase 4; activin A receptor, type II-like kinase 4; serine/threonine-protein kinase receptor R2
UniProt Protein Name	Activin receptor type-1B
UniProt Gene Name	ACVR1B
UniProt Synonym Gene Names	ACVRLK4; ALK4; ACTR-IB; ALK-4; SKR2
UniProt Entry Name	ACV1B_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.