

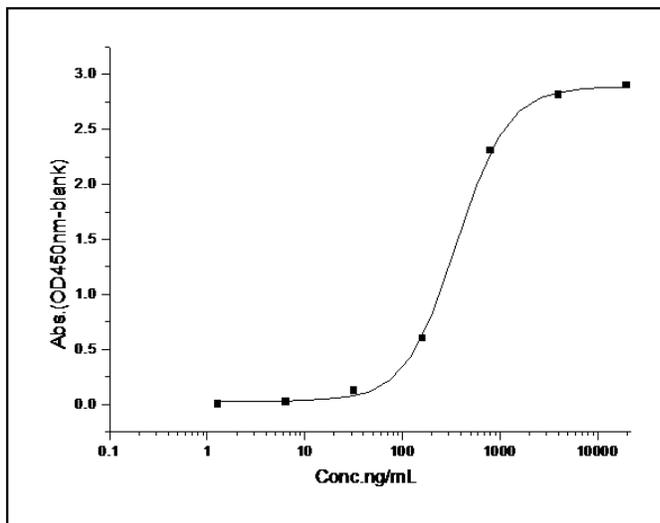
## ACVR1B

### Recombinant Human Activin Receptor type 1B / ALK-4 (His Tag)

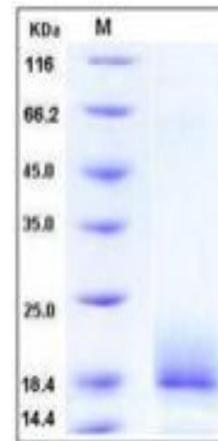
<b>Catalog No.</b>	CRH518A-His CRH518B-His	<b>Quantity:</b>	100 µg 200 µg
<b>Alternate Names:</b>	Activin receptor type-1B, Azctivin receptor type IB, ACTR-IB, Activin receptor-like kinase 4, ALK-4, Serine/threonine-protein kinase receptor R2, SKR2		
<b>Description:</b>	Activin Receptor type 1B (ALK-4) belongs to the protein kinase superfamily, TKL Ser/Thr protein kinase family, and TGFB receptor subfamily. ALK-4 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 is an important regulator of vertebrate development, with roles in mesoderm induction, primitive streak formation, gastrulation, dorsoanterior patterning, and left-right axis determination.		
<b>UniProt ID:</b>	P36896		
<b>Accession Number:</b>	NP_004293.1		
<b>Protein Construction:</b>	A DNA sequence encoding the human ACVR1B extracellular domain (Met 1-Glu 126) was expressed, with a C-terminal polyhistidine tag.		
<b>Source:</b>	HEK 293 Cells		
<b>Formulation:</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.		
<b>Molecular Weight:</b>	The recombinant human ACVR1B consists of 114 amino acids and has a predicted molecular mass of 13 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh ACVR1B is approximately 18-20 kDa due to glycosylation.		
<b>Purity:</b>	> 92 % as determined by SDS-PAGE.		
<b>Endotoxin Level:</b>	< 1.0 EU per µg protein as determined by the LAL method.		
<b>Biological Activity:</b>	Measured by its binding ability in a functional ELISA . Immobilized human TDGF1 at 2 µg/ml (100 µl/well) can bind human ALK-4 with a linear range of 0.032-4 µg/ml.		
<b>Predicted N-terminal:</b>	Ser 24		
<b>Reconstitution:</b>	<b>Centrifuge vial prior to opening.</b> Add sterile distilled water to a concentration of 0.1 mg/mL and gently pipette the solution up and down the sides of the vial. <b>DO NOT VORTEX.</b> Allow several minutes for complete reconstitution.		

**Storage & Stability:** Stable for up to 1 year from date of receipt at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$   
After reconstitution, store working aliquots at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$ .  
**Avoid repeated freeze-thaw cycles.**

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bind human ALK-4 with a linear range of  $0.032\text{-}4\ \mu\text{g/ml}$ .



SDS-PAGE



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