



# Recombinant Protein Technical Manual

**Recombinant Human ALK4/ACVR1B Protein (His Tag)(Active)**  
RPES1957

## Product Data:

**Product SKU:** RPES1957

**Size:** 10µg

**Species:** Human

**Expression host:** Human Cells

**Uniprot:** P36896

## Protein Information:

**Molecular Mass:** 12.5 kDa

**AP Molecular Mass:** 18 kDa

**Tag:** C-6His

**Bio-activity:** Immobilized Human TGF1-Fc(Cat: PKSH033100) at 10µg/ml(100 µl/well) can bind Human ACVR1B-His. The ED50 of Human ACVR1B-His is 4.7 µg/ml.

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of 20mM PB,150mM NaCl,pH7.4.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** Activin Receptor TypeB; Activin Receptor Type IB; ACTR-IB; Activin Receptor-Like Kinase 4; ALK-4; Serine/Threonine-Protein Kinase Receptor R2; SKR2; ACVR1B; ACVRLK4; ALK4

## Immunogen Information:

**Sequence:** Ser24-Glu126

## Background:

Activin Receptor TypeB (ACVR1B) is a single-pass type I membrane protein that belongs to the protein kinase superfamily. ACVR1B contains one GS domain and one protein kinase domain and is expressed in many tissues, most strongly in kidney, pancreas, brain, lung, and liver. 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, ACVR2A or ACVR2B activating ACVR1B through phosphorylation of its regulatory GS domain. They go on to recruit the R-SMADs, SMAD2 and SMAD3. ACVR1B also transducers signals of nodal, GDF, and Vg1. Mutations in ACVR1B are associated with pituitary tumors.