

## ACVR2B active protein

ACVR2B Protein, Mouse, Recombinant (His Tag)

CATALOG #  
**AAA258137**

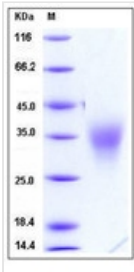
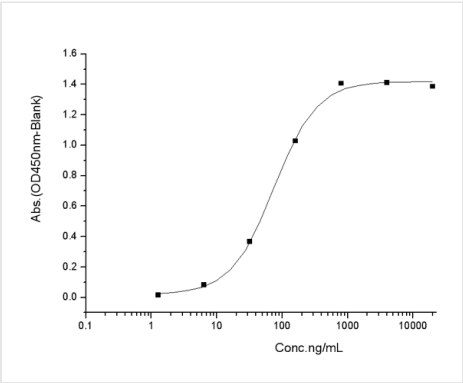
HOST  
**HEK293 Cells**

### PRODUCT SYNONYMS

ACVR2B; ACVR2B Protein; Mouse; Recombinant (His Tag); Mouse ACTRIIB/ACVR2B Protein (His Tag); 4930516B21Rik Protein; ActRIIB Protein; activin A receptor; type IIB; ACVR2B active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Purity/Purification     | >94% as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Form/Format             | Lyophilized from sterile PBS, pH7.4 , 5% Trehalose, 5% minnitol, 0.01% Tween-80                                                                                                                                                                                                                                                                                                                                                                                            |
| Sequence                | Met1-Thr13 4                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Source                  | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Endotoxin               | <1.0EU per ug of the protein as determined by the LAL method                                                                                                                                                                                                                                                                                                                                                                                                               |
| Predicted N Terminal    | Ser I9                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Tag                     | C-His                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Protein Construction    | A DNA sequence encoding the extracellular domain of mouse ACTRIIB (NP_031423.1)(Met 1-Thr 134) was fused with a polyhistidine tag at the C-terminus.                                                                                                                                                                                                                                                                                                                       |
| Reconstitution          | It is recommended that the sterile water (400ul) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is measured by UV-Vis.                                                                                                                                                                                                                                                                                                                       |
| Activity                | <ol style="list-style-type: none"> <li>1. Measured by its binding ability in a functional ELISA. Immobilized Mouse ACVR2B at 2ug/mL (100uL/well) can bind biotinylated mouse INHBA-His. The EC50 of biotinylated mouse INHBA-His is 40-95ng/mL.</li> <li>2. Measured by its ability to neutralize Activin-mediated inhibition on MPC11 cell proliferation. The ED50 for this effect is typically 0.2-0.8ug/mL in the presence of 10ng/mL recombinant Activin A.</li> </ol> |
| Preparation and Storage | Store it under sterile conditions at -20 degree C to -80 degree C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                                                         |



SDS-PAGE

**Application Data**  
Measured by its binding ability in a functional ELISA. Immobilized Mouse ACVR2B at 2ug/mL (100 ul/well) can bind biotinylated mouse INHBA-His, The EC50 of biotinylated mouse INHBA-His is 40-95 ng/mL.

ADDITIONAL INFORMATION

|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for ACVR2B active protein | Background: ACVR2A and ACVR2B are two activin type II receptors. ACVR2B is integral to the activin and myostatin signaling pathway. Ligands such as activin and myostatin bind to ACVR2A and ACVR2B. Myostatin, a negative regulator of skeletal muscle growth, is regarded as a potential therapeutic target and binds to ACVR2B effectively, and to a lesser extent, to ACVR2A. The structure of human ACVR2B kinase domain in complex with adenine establishes the conserved bilobal architecture consistent with all other catalytic kinase domains. Haplotype structure at the ACVR2B and follistatin loci may contribute to interindividual variation in skeletal muscle mass and strength. Defects in ACVR2B are a cause of left-right axis malformations. |
| References                                            | Kosaki R, et al. (1999) Left-right axis malformations associated with mutations in ACVR2B, the gene for human activin receptor type IIB. Am J Med Genet. 82(1):70-6. Dupont S, et al. (2001) No evidence for linkage or for diabetes-associated mutations in the activin type 2B receptor gene (ACVR2B) in French patients with mature-onset diabetes of the young or type 2 diabetes. Diabetes 50(5):1219-21. Albertson RC, et al. (2005) Zebrafish acvr2a and acvr2b exhibit distinct roles in craniofacial development. Developmental dynamics 233(4): 1405-18. Walsh S, et al. (2007) Activin-type II receptor B (ACVR2B) and follistatin haplotype associations with muscle mass and strength in humans. J Appl Physiol. 102(6):2142-8.                      |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                                               |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 6680634                                                                                                                                                                                                                                       |
| NCBI GeneID                      | 11481                                                                                                                                                                                                                                         |
| NCBI Accession #                 | NP_031423.1                                                                                                                                                                                                                                   |
| NCBI GenBank Nucleotide #        | NM_007397.2                                                                                                                                                                                                                                   |
| UniProt Accession #              | P27040; Q3KQI1                                                                                                                                                                                                                                |
| Molecular Weight                 | The recombinant mouse ACTRIIB/ACVR2B comprises 127 amino acids and has a predicted molecular mass of 14.8 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rmACVR2B is approximately 33-37 kDa due to glycosylation |
| NCBI Official Full Name          | activin receptor type-2B                                                                                                                                                                                                                      |
| NCBI Official Synonym Full Names | activin receptor IIB                                                                                                                                                                                                                          |
| NCBI Official Symbol             | Acvr2b                                                                                                                                                                                                                                        |
| NCBI Official Synonym Symbols    | ActRIIB                                                                                                                                                                                                                                       |
| NCBI Protein Information         | activin receptor type-2B; ACTR-IIB; activin receptor type IIB                                                                                                                                                                                 |
| UniProt Protein Name             | Activin receptor type-2B                                                                                                                                                                                                                      |

|                            |             |
|----------------------------|-------------|
| UniProt Gene Name          | Acvr2b      |
| UniProt Synonym Gene Names | ACTR-IIB    |
| UniProt Entry Name         | AVR2B_MOUSE |

**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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | [contact@aaabiotech.com](mailto:contact@aaabiotech.com)  
Online datasheet: <https://stage.aaabiotech.com/hek293-cells-active-protein/acvr2b/258137>