

## ALK-1 Active Protein | ACVRL1 active protein

ALK-1 Protein, Human, Recombinant (hFc Tag)

CATALOG #  
**AAA257825**

HOST  
**HEK293 Cells**

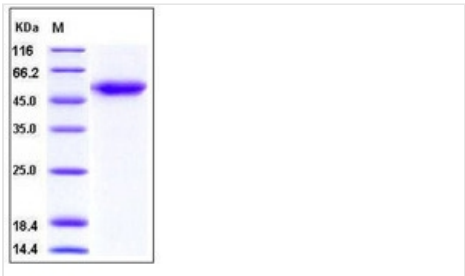
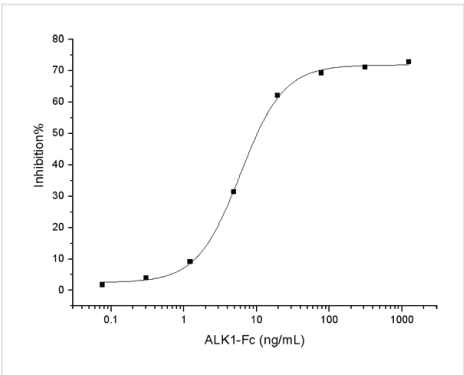
### PRODUCT SYNONYMS

ALK-1; ALK-1 Protein; Human; Recombinant (hFc Tag); Human ALK-1/ACVRL1 Protein (Fc Tag); ACVRLK1 Protein; ALK1 Protein; HHT Protein; HHT2 Protein; ORW2 Protein; SKR3 Protein; TSR-I Protein; activin A receptor type II-like 1; ACVRL1 active protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Purity/Purification     | >97% 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-Gln118                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Species                 | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Endotoxin               | <1.0EU per ug of the protein as determined by the LAL method                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Predicted N Terminal    | Asp 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tag                     | C-human IgG1-Fc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Protein Construction    | A DNA sequence encoding the N-terminal segment (Met 1-Gln 118) of the extracellular domain of human ALK1 (NP_000011.2) pro-protein was fused with the Fc region of human IgG1 at the C-terminus.                                                                                                                                                                                                                                                                                                                 |
| Reconstitution          | A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.                                                                                                                                                                                                                                                                                                                                                                                  |
| Activity                | <ol style="list-style-type: none"> <li>1. Measured by its ability to bind Human ENG-Fc in functional Elisa.</li> <li>2. Measured by its ability to inhibit BMP9 induced alkaline phosphatase production by MC3T3E1 mouse chondrogenic cells. David, L. et al. (2007) Blood 109:1953. The ED50 for this effect is typically 5-15ng/mL in the presence of 2ng/mL of recombinant human BMP9.</li> </ol>                                                                                                             |
| Preparation and Storage | <p>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.</p> <p>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.</p> |

IMAGES



SDS-PAGE

**Application Data**  
Measured by its ability to inhibit BMP9 induced alkaline phosphatase production by MC3T3E1 mouse chondrogenic cells. David, L. et al. (2007) Blood 109:1953. The ED50 for this effect is typically 5-15 ng/mL in the presence of 2 ng/mL of recombinant human BMP9.

ADDITIONAL INFORMATION

|                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for ACVRL1 active protein | Background: Activin A receptor, type II-like 1 (ACVRL1), also known as ALK-1 (activin receptor-like kinase 1), is an endothelial-specific type I receptor of the TGF-beta (transforming growth factor beta) receptor family of ligands. On ligand binding, a heteromeric receptor complex forms consisting of two type II and two type I transmembrane serine/threonine kinases. ACVRL1 protein is expressed in certain blood vessels of kidney, spleen, heart and intestine, serving as an important role during vascular development. Mutations in ACVRL1 gene are associated with hemorrhagic telangiectasia type 2, also known as Rendu-Osler-Weber syndrome 2 and vascular disease. |
| References                                            | French Rendu-Osler network,et al. (2004) Molecular screening of ALK1/ACVRL1 and ENG genes in hereditary hemorrhagic telangiectasia in France. Hum Mutat. 23(4): 289-299.Simon M, et al. (2006) Association of a polymorphism of the ACVRL1 gene with sporadic arteriovenous malformations of the central nervous system. J Neurosurg. 104(6): 945-9.Argyriou L, et al. (2006) Novel mutations in the ENG and ACVRL1 genes causing hereditary hemorrhagic teleangiectasia. Int J Mol Med. 17(4):655-9.                                                                                                                                                                                    |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 116734712                                                                                                                 |
| NCBI GeneID                      | 94                                                                                                                        |
| NCBI Accession #                 | NP_000011.2                                                                                                               |
| NCBI GenBank Nucleotide #        | NM_000020.2                                                                                                               |
| UniProt Accession #              | P37023; A6NGA8                                                                                                            |
| Molecular Weight                 | 56,124 Da                                                                                                                 |
| NCBI Official Full Name          | serine/threonine-protein kinase receptor R3                                                                               |
| NCBI Official Synonym Full Names | activin A receptor type II-like 1                                                                                         |
| NCBI Official Symbol             | ACVRL1                                                                                                                    |
| NCBI Official Synonym Symbols    | HHT; ALK1; HHT2; ORW2; SKR3; ALK-1; TSR-I; ACVRLK1                                                                        |
| NCBI Protein Information         | serine/threonine-protein kinase receptor R3; TGF-B superfamily receptor type I; activin A receptor, type II-like kinase 1 |
| UniProt Protein Name             | Serine/threonine-protein kinase receptor R3                                                                               |
| UniProt Gene Name                | ACVRL1                                                                                                                    |
| UniProt Synonym Gene Names       | ACVRLK1; ALK1; SKR3; ALK-1; TSR-I                                                                                         |

**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.

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Online datasheet: <https://stage.aaabiotech.com/hek293-cells-acvr11-active-protein/alk-1/257825>