

Recombinant Mouse Activin A Receptor, Type II-like 1, Fc-tagged

Cat. No. Acvrl1-498M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Acvrl1 encoding the signal peptide from human CD33 joined with amino acid residues 23 - 119 of the extracellular domain of mouse Activin Receptor-Like Kinase 1 was fused to the Fc region of human IgG1 via a polypeptide linker and expressed in NSO cells.
Species	Mouse
Source	Mammalian Cells
Protein Length	23-119 a.a.
Description	Activin A receptor type II-like 1, also known as ACVRL1, is a human gene. ACVRL1 is a receptor in the TGF beta signaling pathway. It is also known as "activin receptor-like kinase 1", or "ALK1". This gene encodes a type I cell-surface receptor for the TGF-beta superfamily of ligands. It shares with other type I receptors a high degree of similarity in serine-threonine kinase subdomains, a glycine- and serine-rich region (called the GS domain) preceding the kinase domain, and a short C-terminal tail. The encoded protein, sometimes termed ALK1, shares similar domain structures with other closely related ALK or activin receptor-like kinase proteins that form a subfamily of receptor serine/threonine kinases. Mutations in this gene are associated with hemorrhagic telangiectasia type 2, also known as Rendu-Osler-Weber syndrome 2 suggesting a critical role for ALK-1 in the control of blood vessel development or repair. Human and mouse ALK-1 share approximately 71% amino acid sequence

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	identity in their extracellular regions.
Molecular Weight	The predicted molecular weight of Recombinant Mouse ALK-1 is Mr 37.7 kDa. However, the actual molecular weight as observed by migration on SDS Page is Mr 50-55 kDa.
State Of Matter	Lyophilized.
Purity	>95% by SDS Page and analyzed by silver stain.
Formulation	This recombinant protein was 0.2 µm filtered and lyophilized from modified Dulbecco's phosphate buffered saline (1X PBS) pH 7.2 – 7.3 with no calcium, magnesium, or preservatives.
Endotoxin	<1.0 EU/g as determined by the LAL method.
Biological Activity	Measured by its ability to inhibit recombinant Human BMP-9 induced alkaline phosphatase production by ATDC5 cells. The ED50 for this effect is 20 - 80 ng/ml in the presence of 2 ng/ml of recombinant Human BMP-9.
Storage And Stability	This lyophilized protein is stable for six to twelve months when stored desiccated at -20°C to -70°C. After aseptic reconstitution, this protein may be stored at 2°C to 8°C for one month or at -20°C to -70°C in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles. See Product Insert for exact lot specific storage instructions.

GENE INFORMATION

Gene Name	Acvrl1 activin A receptor, type II-like 1 [Mus musculus]
Synonyms	Acvrl1; activin A receptor, type II-like 1; Alk1; Acvrlk1; AI115505; AI427544; activin A receptor type II-like 1; activin receptor-like kinase-1; EC 2.7.11.30; Alk-1

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Gene ID	11482
mRNA Refseq	NM_009612
Protein Refseq	NP_033742
UniProt ID	Q61288
Chromosome Location	15 F3
Pathway	Cytokine-cytokine receptor interaction; TGF-beta signaling pathway
Function	ATP binding; activin receptor activity, type I; kinase activity; magnesium ion binding; manganese ion binding; metal ion binding; nucleotide binding; protein binding; protein kinase activity; protein serine/threonine kinase activity; receptor activity; transferase activity; transforming growth factor beta receptor activity; transmembrane receptor protein serine/threonine kinase activity