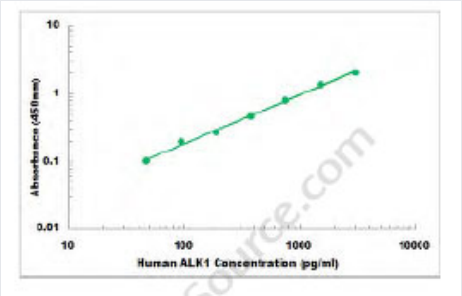
ALK1 (ACVRL1) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	ALK1 (ACVRL1), ELISA Kit
Full Product Name	Human ALK1 ELISA Kit
Product Gene Name	ACVRL1 elisa kit
Product Synonym Names	ACVRLK1; ALK1; Serine/threonine-protein kinase receptor R3; SKR3; Activin receptor-like kinase 1; ALK-1; TGF-B superfamily receptor type I; TSR-I
Species Reactivity	Human
Samples	Cell Culture Supernates, Serum, Plasma
Sensitivity	<15 pg/ml
Specificity	The Human ALK1 ELISA Kit allows for the detection and quantification of endogenous levels of natural and/or recombinant Human ALK1 proteins within the range of 46.9 pg/ml - 3000 pg/ml.
Preparation and Storage	Shipped and store at 4 degree C for 6 months, store at -20 degree C for one year. Avoid freeze/thaw cycles.
Molecular Weight	56,124 Da
OMIM	Z22533 mRNA
3D Structure	ModBase 3D Structure for P37023
Related Product Information for ACVRL1 elisa kit	Principle of the Assay: The Human ALK1 ELISA (Enzyme-Linked Immunosorbent Assay) kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of Human ALK1 in Cell Culture Supernates, Serum, Plasma. This assay employs an antibody specific for Human ALK1 coated on a 96-well plate. Standards and samples are pipetted into the wells and ALK1 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human ALK1 antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of ALK1 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm. Background: Serine/threonine-protein kinase receptor R3 is an enzyme that in humans is encoded by the ACVRL1 gene. 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 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.
Other Notes	Small volumes of ACVRL1 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ACVRL1 purchase	MBS8248324 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the ALK1 (ACVRL1) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing ACVRL1. The ELISA analytical biochemical technique of the MBS8248324 kit is based on ACVRL1 antibody-ACVRL1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect ACVRL1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, ACVRL1. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of ACVRL1 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ACVRL1. It may not necessarily be applicable to this product.

NCBI GI #	116734712
NCBI GeneID	94
NCBI Accession #	NP_000011.2
UniProt Primary Accession #	P37023
UniProt Secondary Accession #	A6NGA8
UniProt Related Accession #	P37023
GenBank Nucleotide #	NM_000020.2
NCBI Official Full Name	serine/threonine-protein kinase receptor R3
NCBI Official Synonym Full Names	activin A receptor like type 1
NCBI Official Symbol	ACVRL1
NCBI Official Synonym Symbols	HHT; ALK1; HHT2; ORW2; SKR3; ALK-1; TSR-I; ACVRLK1
UniProt Protein Name	Serine/threonine-protein kinase receptor R3
UniProt Synonym Protein Names	Activin receptor-like kinase 1; ALK-1; TGF-B superfamily receptor type I; TSR-I
Protein Family	Serine/threonine-protein kinase receptor
UniProt Gene Name	ACVRL1
UniProt Synonym Gene Names	ACVRLK1; ALK1; SKR3; ALK-1; TSR-I
UniProt Entry Name	ACVL1_HUMAN
NCBI Protein Information	serine/threonine-protein kinase receptor R3
NCBI Summary for ACVRL1	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. [provided by RefSeq, Jul 2008]

UniProt Comments for ACVRL1	ALK1: a kinase of the STKR family. A type I cell-surface receptor for the TGF-beta superfamily of ligands including Activin A. Highly expressed in human placenta and lung. Deficiency causes hemorrhagic telangiectasia type 2 also known as Rendu-Osler-Weber syndrome 2. Protein type: EC 2.7.11.30; Kinase, protein; Membrane protein, integral; Protein kinase, Ser/Thr (receptor); Protein kinase, TKL; STKR family; TKL group; Type1 subfamily Chromosomal Location of Human Ortholog: 12q13.13 Cellular Component: cell surface; integral to plasma membrane; plasma membrane Molecular Function: activin binding; activin receptor activity, type I; ATP binding; protein binding; protein kinase binding; protein serine/threonine kinase activity; SMAD binding; transforming growth factor beta binding; transforming growth factor beta receptor activity; transforming growth factor beta receptor activity, type I Biological Process: angiogenesis; blood circulation; blood vessel endothelial cell proliferation during sprouting angiogenesis; blood vessel maturation; blood vessel remodeling; BMP signaling pathway; lymphangiogenesis; negative regulation of blood vessel endothelial cell migration; negative regulation of cell adhesion; negative regulation of cell growth; negative regulation of cell migration; negative regulation of cell proliferation; negative regulation of focal adhesion formation; positive regulation of BMP signaling pathway; positive regulation of chondrocyte differentiation; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription, DNA-dependent; protein amino acid phosphorylation; regulation of blood pressure; regulation of blood vessel endothelial cell migration; regulation of DNA replication; regulation of endothelial cell proliferation; regulation of transcription, DNA-dependent; signal transduction; transforming growth factor beta receptor signaling pathway; wound healing, spreading of epidermal cells Disease: Telangiectasia, Hereditary Hemorrhagic, Type 2
Research Articles on ACVRL1	**1.** The preponderance of ACVRL1 mutations was due to founder mutations, specifically, c.830C>A (p.Thr277Lys), which was found in 24 families from the same geographical area of Norway.
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