

## Recombinant Human ALK2 (Q207D), GST-tagged

Cat. No. ACVR1-32H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant human ALK2 (Q207D) (147-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
<b>Species</b>	Human
<b>Source</b>	Sf9 Cells
<b>ProteinLength</b>	147-end a.a.
<b>Description</b>	ALK 2 is a receptor serine/threonine kinase that is member of the ALK family and is upstream of signaling pathway involving the SMAD proteins especially SMAD1/5/8. Knockdown of ALK2, but not TGF $\beta$ RI (ALK5), abrogates endoglin-mediated decrease in cell motility of prostate cancer cells and constitutively active ALK2 is sufficient to restore a low-motility phenotype in endoglin deficient cells. Therefore, endoglin decreases prostate cancer cell motility through activation of the ALK2-Smad1 pathway. ALK2 is the key gene involved in Fibrodysplasia ossificans progressiva (FOP), a rare autosomal dominant congenital disorder characterized by progressive heterotopic bone formation in muscle tissues.
<b>Form</b>	50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.
<b>Molecular Mass</b>	~67 kDa
<b>Applications</b>	Kinase Assay

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**Storage**

Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

## GENE INFORMATION

**Gene Name**

ACVR1 activin A receptor, type I [ Homo sapiens ]

**Official Symbol**

ACVR1

**Synonyms**

ACVR1; activin A receptor, type I; ACVRLK2; activin receptor type-1; ACVR1A; ALK2; SKR1; activin receptor type I; hydroxyalkyl-protein kinase; activin receptor-like kinase 2; TGF-B superfamily receptor type I; activin A receptor, type II-like kinase 2; serine/threonine-protein kinase receptor R1; FOP; TSRI; ACTRI;

**Gene ID**

90

**mRNA Refseq**

NM\_001105

**Protein Refseq**

NP\_001096

**MIM**

102576

**UniProt ID**

Q04771

**Chromosome Location**

2q23-q24

**Pathway**

ALK1 pathway, organism-specific biosystem; ALK1 signaling events, organism-specific biosystem; ALK2 signaling events, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor

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interaction, conserved biosystem; TGF-beta signaling pathway, organism-specific biosystem; TGF-beta signaling pathway, conserved biosystem;

**Function**

ATP binding; SMAD binding; activin binding; contributes\_to activin receptor activity, type I; follistatin binding; metal ion binding; nucleotide binding; protein binding; protein homodimerization activity; protein serine/threonine kinase activity; receptor activity; receptor signaling protein serine/threonine kinase activity; transforming growth factor beta binding; transforming growth factor beta receptor activity, type I; transmembrane receptor protein serine/threonine kinase activity;

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