Active Recombinant Human ZAK, GST-tagged

Cat. No. ZAK-1510H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human ZAK was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species	Human
Source	Sf9 Cells
ProteinLength	Full length
Description	ZAK is a member of the MAPKKK family of signal transduction molecules and mediates gamma radiation signaling leading to cell cycle arrest. The activity of ZAK plays a role in cell cycle checkpoint regulation as well as being involved in regulating actin organization. Expression of kinase-dead ZAK in mouse fibroblasts disrupts actin stress fibers and causes morphologic changes. ZAK can activate JNK through MKK4/MKK7 and ERK5/p38-gamma via MKK3/MKK6. Expression of ZAK increases the population of cells in the G2/M phase of the cell cycle, whereas dominant-negative ZAK attenuated the G2 arrest caused by gamma radiation.
Form	Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.
Bio-activity	62 nmol/min/mg
Molecular Mass	~82 kDa

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Purity	>70%
Applications	Kinase Assay, Western Blot
Storage	Store at –70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. Avoid freeze/thaw cycles.
Concentration	0.1μg/μl

GENE INFORMATION

Gene Name	ZAK sterile alpha motif and leucine zipper containing kinase AZK [Homo sapiens]
Official Symbol	ZAK
Synonyms	ZAK; sterile alpha motif and leucine zipper containing kinase AZK; mitogen-activated protein kinase kinase kinase MLT; HCCS-4; mixed lineage kinase 7; mixed lineage kinase-related kinase MRK-beta; human cervical cancer suppressor gene 4 protein; MLK-like mitogen-activated protein triple kinase; mixed lineage kinase with a leucine zipper and a sterile alpha motif; pk; AZK; MLT; MRK; MLK7; MLTK; mlklak;
Gene ID	51776
mRNA Refseq	NM_016653
Protein Refseq	NP_057737
Pathway	MAPK signaling pathway, organism-specific biosystem; MAPK signaling pathway, organism-specific biosystem; MAPK signaling pathway, conserved biosystem; Signaling mediated by p38-gamma and p38-delta, organism-specific biosystem; Tight junction, organism-specific biosystem; Tight junction, conserved biosystem;

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Function	ATP binding; MAP kinase kinase kinase activity; magnesium ion binding; nucleotide binding; protein binding; protein serine/threonine kinase activity;

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