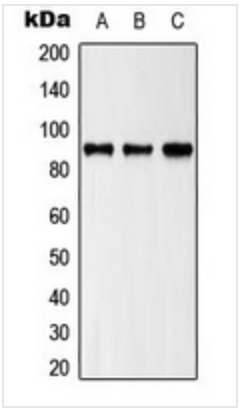
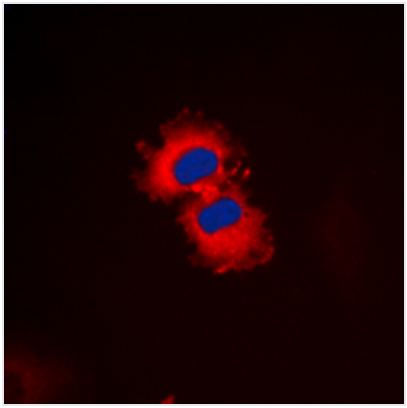
ZAK Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	ZAK, Polyclonal Antibody
Full Product Name	Rabbit anti-ZAK Antibody
Product Gene Name	anti-ZAK antibody
Product Synonym Names	MLTK; Mitogen-activated protein kinase kinase kinase MLT; Human cervical cancer suppressor gene 4 protein; HCCS-4; Leucine zipper- and sterile alpha motif-containing kinase; MLK-like mitogen-activated protein triple kinase; Mixed lineage kinase-related kinase; MLK-related kinase; MRK; Sterile alpha motif- and leucine zipper-containing kinase AZK
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Purity/Purification	The antibody was purified by immunogen affinity chromatography.
Concentration	1mg/mL (lot specific)
Preparation and Storage	Store at -20 degree C. Avoid repeated freeze/thaw cycles.
Molecular Weight	91,155 Da
Chromosome Location	Chromosome: 2; NC_000002.11 (173940565..174132737). Location: 2q24.2
OMIM	609479
3D Structure	ModBase 3D Structure for Q9NYL2
Immunogen	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human ZAK. The exact sequence is proprietary.
Product Categories/Family for anti-ZAK antibody	Primary antibodies
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-ZAK antibody	Western Blot (WB), Immunofluorescence (IF), Immunochemistry (IC)
Application Notes for anti-ZAK antibody	WB: 1:500-1:1000 IF:IC: 1:100-1:500
Related Product Information for anti-ZAK antibody	MBS4506733 is an antibody targeting ZAK. Also known as Rabbit anti-ZAK Antibody. Reactive in Human, Mouse. Host: Rabbit.
Other Notes	Small volumes of anti-ZAK antibody 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.



Western Blot (WB) of anti-ZAK antibody
Western blot analysis of ZAK expression in HeLa (A), HepG2 (B), NIH3T3 (C) whole cell lysates.



Immunofluorescence (IF) of anti-ZAK antibody
Immunofluorescent analysis of ZAK staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

ADDITIONAL DETAILS

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

NCBI GI #	82880648
NCBI GeneID	51776
NCBI Accession #	NP_057737.2
UniProt Primary Accession #	Q9NYL2
UniProt Secondary Accession #	Q9ESL4
UniProt Related Accession #	Q9NYL2
GenBank Nucleotide #	NM_016653.2
NCBI Official Full Name	mitogen-activated protein kinase kinase kinase MLT isoform 1
NCBI Official Symbol	ZAK
NCBI Official Synonym Symbols	pk; AZK; MLT; MRK; MLK7; MLTK; mlklak
UniProt Protein Name	Mitogen-activated protein kinase kinase kinase MLT
UniProt Synonym Protein Names	Human cervical cancer suppressor gene 4 protein; HCCS-4; Leucine zipper- and sterile alpha motif-containing kinase; MLK-like mitogen-activated protein triple kinase; Mixed lineage kinase-related kinase; MLK-related kinase; MRK; Sterile alpha motif- and leucine zipper-containing kinase AZK
Protein Family	Mitogen-activated protein kinase kinase kinase
UniProt Gene Name	MLTK
UniProt Synonym Gene Names	ZAK; HCCS-4; MLK-related kinase; MRK
UniProt Entry Name	MLTK_HUMAN
NCBI Protein Information	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

NCBI Summary for ZAK	This gene is a member of the MAPKKK family of signal transduction molecules and encodes a protein with an N-terminal kinase catalytic domain, followed by a leucine zipper motif and a sterile-alpha motif (SAM). This magnesium-binding protein forms homodimers and is located in the cytoplasm. The protein mediates gamma radiation signaling leading to cell cycle arrest and activity of this protein plays a role in cell cycle checkpoint regulation in cells. The protein also has pro-apoptotic activity. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]
UniProt Comments for ZAK	ZAK: a mixed-lineage kinase containing a leucine-zipper (LZ) and a sterile-alpha motif (SAM). It is reported to activate the JNK/SAPK and NF-kappaB pathways. Protein type: EC 2.7.11.25; Kinase, protein; Protein kinase, TKL; Protein kinase, Ser/Thr (non-receptor); TKL group; MLK family; MLK subfamily Chromosomal Location of Human Ortholog: 2q24.2 Cellular Component: cytoplasm; nucleus Molecular Function: protein serine/threonine kinase activity; protein binding; MAP kinase kinase kinase activity; magnesium ion binding; ATP binding Biological Process: cell death; cell proliferation; response to radiation; activation of MAPKK activity; positive regulation of apoptosis; DNA damage checkpoint; response to stress; cytoskeleton organization and biogenesis; cell cycle arrest; cell differentiation; protein amino acid phosphorylation; cell cycle checkpoint; activation of JNK activity
Research Articles on ZAK	**1.** MRK is a novel RhoC effector that controls LPA-stimulated cell invasion at least in part by regulating myosin dynamics, ERK and p38
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