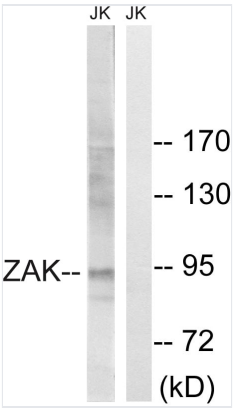
ZAK Antibody

PRODUCT OVERVIEW

Product Name	ZAK, Antibody
Full Product Name	ZAK (Ab-165) Antibody
Product Gene Name	anti-ZAK antibody
Product Synonym Names	AZK; EC 2.7.11.25; mixed lineage kinase-related kinase; MLTK; MRK-beta; sterile alpha motif and leucine zipper containing kinase AZK
Species Reactivity	Human, Mouse
Form/Format	In phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Specificity	ZAK (Ab-165) antibody detects endogenous levels of total ZAK protein.
Preparation and Storage	Store at-20 degree C for 1 year.
Molecular Weight	35,468 Da
OMIM	609479
3D Structure	ModBase 3D Structure for Q9NYL2
Immunogen	The antiserum was produced against synthesized non-phosphopeptide derived from human ZAK around the phosphorylation site of serine 165 (H-M-SP-L-V).
Product Categories/Family for anti-ZAK antibody	Autophagy antibody; Cancer; Cardiovascular; Cell Biology; Epigenetics & Nuclear Signaling; Developmental Biologys; Immunology; Drug Discovery Products; Metabolism; Neuroscience; Signal Transduction; Stem Cells
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-ZAK antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-ZAK antibody	WB: 1:500~1:1000 ELISA: 1:40000
Related Product Information for anti-ZAK antibody	MBS852588 is an antibody targeting ZAK. Also known as ZAK (Ab-165) Antibody. Reactive in Human, Mouse.
Product References and Citations for anti-ZAK antibody	Liu T.-C., Biochem. Biophys. Res. Commun. 274:811-816(2000). Bloem L.J., J. Mol. Cell. Cardiol. 33:1739-1750(2001). The MGC Project Team; Genome Res. 14:2121-2127(2004).
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 extracts from Jurkat cells, using ZAK (Ab-165) antibody.

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 #	Q53SX1; Q580W8; Q59GY5; Q86YW8; Q9HCC4; Q9HCC5; Q9HDD2; Q9NYE9; B3KPG2
UniProt Related Accession #	Q9NYL2
GenBank Nucleotide #	NM_016653.2
NCBI Official Full Name	mitogen-activated protein kinase kinase kinase 20 isoform 1
NCBI Official Synonym Full Names	mitogen-activated protein kinase kinase kinase 20
NCBI Official Symbol	MAP3K20
NCBI Official Synonym Symbols	pk; AZK; MLT; MRK; ZAK; CNM6; MLK7; MLTK; SFMMP; mlklak; MLTKbeta; MLTKalpha
UniProt Protein Name	Mitogen-activated protein kinase kinase kinase 20
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; Mitogen-activated protein kinase kinase kinase MLT; 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	MAP3K20
UniProt Synonym Gene Names	HCCS-4; MLK-related kinase; MRK
NCBI Protein Information	mitogen-activated protein kinase kinase kinase 20
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	Stress-activated component of a protein kinase signal transduction cascade. Regulates the JNK and p38 pathways. Part of a signaling cascade that begins with the activation of the adrenergic receptor ADRA1B and leads to the activation of MAPK14. Pro-apoptotic. Role in regulation of S and G2 cell cycle checkpoint by direct phosphorylation of CHEK2 (PubMed:10924358, PubMed:11836244, PubMed:15342622, PubMed:21224381). Involved in limb development (PubMed:26755636).
Research Articles on ZAK	**1.** Gene set enrichment analysis disclosed a significant correlation between ZAK+ colorectal premalignant lesions and gene sets belonging to the MAPK/ERK and motility-related signaling pathways of the reactome database, strongly suggesting that ZAK induces such pro-tumoral reaction cascades in human cancers.
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