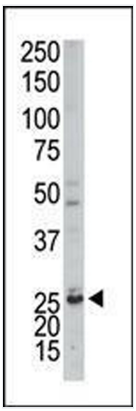
AK3 Antibody – Rabbit Polyclonal

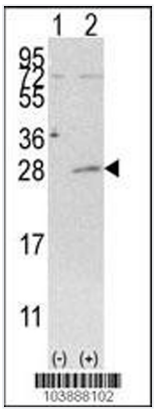
PRODUCT OVERVIEW

Product Name	AK3, Polyclonal Antibody
Full Product Name	AK3, CT (H38) (Adenylate Kinase Isoenzyme 4, Mitochondrial, Adenylate Kinase 3-like, ATP-AMP Transphosphorylase, AK3L1, AK3L2, AK4) (PE)
Product Gene Name	anti-AK3 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with R-Phycoerythrin (PE).
Purity/Purification	Purified by Protein G Affinity Chromatography.
Specificity	Recognizes human AK3. Species Crossreactivity: mouse.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: PE conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	25,268 Da
OMIM	103030
3D Structure	ModBase 3D Structure for P27144
Immunogen	Synthetic peptide selected from the C-terminal region of human AK3 (KLH).
Conjugate	PE
Note	Preservative Free
Special Handling	Light sensitive
Product Categories/Family for anti-AK3 antibody	Antibodies; Enzymes
Applications Tested/Suitable for anti-AK3 antibody	Immunohistochemistry (IHC), FLISA, Western Blot (WB)
Application Notes for anti-AK3 antibody	IHC: 1:50-1:100 FLISA: 1:1,000 WB: 1:100-1:500 Applications are based on unconjugated antibody.
Related Product Information for anti-AK3 antibody	MBS6461663 is an antibody targeting AK3. Also known as AK3, CT (H38) (Adenylate Kinase Isoenzyme 4, Mitochondrial, Adenylate Kinase 3-like, ATP-AMP Transphosphorylase, AK3L1, AK3L2, AK4) (PE). Reactive in Human, Mouse. Host: Rabbit.
Product References and Citations for anti-AK3 antibody	1. Van Rompay, A.R., et al., Eur. J. Biochem. 261(2):509-517 (1999). 2. Yoneda, T., et al., Brain Res. Mol. Brain Res. 62(2):187-195 (1998). 3. Xu, G., et al., Genomics 13(3):537-542 (1992). 4. Robson, E.B., et al., Cytogenet. Cell Genet. 32(1-4), 144-152 (1982).

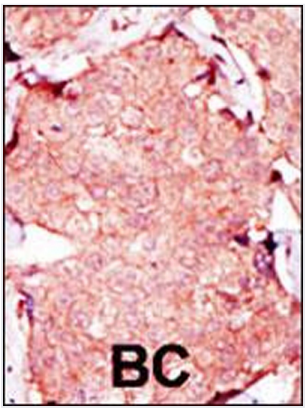
Other Notes	Small volumes of anti-AK3 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-AK3 antibody
The anti-AK3 Pab is used in Western blot to detect AK3 in mouse kidney tissue lysate.



Western Blot (WB) of anti-AK3 antibody
Western blot analysis of AK3 (arrow) using rabbit polyclonal AK3 Antibody (C-term H38). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the AK3 gene (Lane 2) (Origene Technologies).



Immunohistochemistry (IHC) of anti-AK3 antibody
Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for AK3. It may not necessarily be applicable to this product.

NCBI GI #	8051579
NCBI GeneID	205
NCBI Accession #	NP_037542
NCBI Related Accession #	NP_001005353; NP_982289
UniProt Primary Accession #	P27144
UniProt Secondary Accession #	Q6IBH4; Q6NXQ5; Q8IUU9; B2R927; D3DQ62
UniProt Related Accession #	P27144
GenBank Nucleotide #	NM_013410.3
NCBI Official Full Name	adenylate kinase 4, mitochondrial
NCBI Official Synonym Full Names	adenylate kinase 4

NCBI Official Symbol	AK4
NCBI Official Synonym Symbols	AK3; AK 4; AK3L1; AK3L2
UniProt Protein Name	Adenylate kinase 4, mitochondrial
UniProt Synonym Protein Names	Adenylate kinase 3-like; GTP:AMP phosphotransferase AK4
Protein Family	GTP:AMP phosphotransferase
UniProt Gene Name	AK4
UniProt Entry Name	KAD4_HUMAN
NCBI Protein Information	adenylate kinase 4, mitochondrial
NCBI Summary for AK3	This gene encodes a member of the adenylate kinase family of enzymes. The encoded protein is localized to the mitochondrial matrix. Adenylate kinases regulate the adenine and guanine nucleotide compositions within a cell by catalyzing the reversible transfer of phosphate group among these nucleotides. Five isozymes of adenylate kinase have been identified in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated. A pseudogene for this gene has been located on chromosome 17. Three transcript variants encoding the same protein have been identified for this gene. Sequence alignment suggests that the gene defined by NM_013410, NM_203464, and NM_001005353 is located on chromosome 1. [provided by RefSeq, Jul 2008]
UniProt Comments for AK3	AK3L1: Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. May also be active with GTP. Belongs to the adenylate kinase family. Protein type: Nucleotide Metabolism - purine; EC 2.7.4.10; EC 2.7.4.6; Mitochondrial; Kinase, other Chromosomal Location of Human Ortholog: 1p31.3 Cellular Component: mitochondrion; mitochondrial matrix Molecular Function: GTP binding; nucleoside diphosphate kinase activity; adenylate kinase activity; nucleoside triphosphate adenylate kinase activity; ATP binding Biological Process: response to drug; ATP metabolic process; nucleoside triphosphate biosynthetic process; nucleoside diphosphate phosphorylation; ADP biosynthetic process; brain development; liver development; AMP metabolic process; GTP metabolic process
Research Articles on AK3	**1.** a stress-protective function of AK4
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