

Rabbit MARK3 Polyclonal Antibody | anti-MARK3 antibody

Anti-MARK3 Antibody Picoband

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19841	Rabbit	Human, Mouse, Rat	Western Blot, Immunohistochemistry, Flow Cytometry, Functional Assay, ELISA

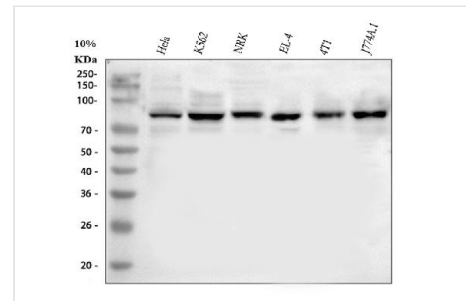
PRODUCT SYNONYMS

MARK3; Polyclonal Antibody; Anti-MARK3 Antibody Picoband; Zinc finger protein Helios; aryl hydrocarbon receptor nuclear translocator like 2; Cytoskeleton-associated protein 5; Colonic and hepatic tumor overexpressed gene protein; Ch-TOG; CKAP5; KIAA0097; anti-MARK3 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Expressed in fetal brain.Highly expressed in brain and placenta. Lower levels in heart, liver, thymus, kidney and lung. Located to endothelial cells and neuronal cells of the suprachiasmatic nucleus (SCN). Also detected in endothelial cells of the heart, lung and kidney. In the brain, specificallyExpressed in the thalamus, hippocampus and amygdala.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Applicable Applications for anti-MARK3 antibody	WB (Western Blot), IHC (Immunohistochemistry), FCM/FACS (Flow Cytometry), ELISA
Application Notes	WB: 0.25-0.5ug/ml, Human, Mouse, Rat IHC(Paraffin-embedded Section): 2-5ug/ml, Human, Mouse, Rat FC/FACS (Fixed): 1-3ug/1x10 ⁶ cells, Human ELISA: 0.1-0.5ug/ml
Immunogen	E coli-derived human MARK3 recombinant protein (Position: H311-D648).
Subcellular Localization	Nucleus
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.

Protein Function	Transcriptional activator which forms a core component of the circadian clock. The circadian clock, an internal time-keeping system, regulates various physiological processes through the generation of approximately 24 hour circadian rhythms in gene expression, which are translated into rhythms in metabolism and behavior. It is derived from the Latin roots 'circa' (about) and 'diem' (day) and acts as an important regulator of a wide array of physiological functions including metabolism, sleep, body temperature, blood pressure, endocrine, immune, cardiovascular, and renal function. Consists of two major components: the central clock, residing in the suprachiasmatic nucleus (SCN) of the brain, and the peripheral clocks that are present in nearly every tissue and organ system. Both the central and peripheral clocks can be reset by environmental cues, also known as Zeitgebers (German for 'timegivers'). The predominant Zeitgeber for the central clock is light, which is sensed by retina and signals ly to the SCN. The central clock entrains the peripheral clocks through neuronal and hormonal signals, body temperature and feeding-related cues, aligning all clocks with the external light/dark cycle. Circadian rhythms allow an organism to achieve temporal homeostasis with its environment at the molecular level by regulating gene expression to create a peak of protein expression once every 24 hours to control when a particular physiological process is most active with respect to the solar day. Transcription and translation of core clock components (CLOCK, NPAS2, ARNTL/BMAL1, ARNTL2/BMAL2, PER1, PER2, PER3, CRY1 and CRY2) plays a critical role in rhythm generation, whereas delays imposed by post-translational modifications (PTMs) are important for determining the period (tau) of the rhythms (tau refers to the period of a rhythm and is the length, in time, of one complete cycle). A diurnal rhythm is synchronized with the day/night cycle, while the ultradian and infradian rhythms have a period shorter and longer than 24 hours, respectively. Disruptions in the circadian rhythms contribute to the pathology of cardiovascular diseases, cancer, metabolic syndromes and aging. A transcription/translation feedback loop (TTFL) forms the core of the molecular circadian clock mechanism. Transcription factors, CLOCK or NPAS2 and ARNTL/BMAL1 or ARNTL2/BMAL2, form the positive limb of the feedback loop, act in the form of a heterodimer and activate the transcription of core clock genes and clock-controlled genes (involved in key metabolic processes), harboring E-box elements (5'-CACGTG-3') within their promoters. The core clock genes: PER1/2/3 and CRY1/2 which are transcriptional repressors form the negative limb of the feedback loop and interact with the CLOCK NPAS2-ARNTL/BMAL1 ARNTL2/BMAL2 heterodimer inhibiting its activity and thereby negatively regulating their own expression. This heterodimer also activates nuclear receptors NR1D1/2 and RORA/B/G, which form a second feedback loop and which activate and repress ARNTL/BMAL1 transcription, respectively. The CLOCK-ARNTL2/BMAL2 heterodimer activates the transcription of SERPINE1/PAI1 and BHLHE40/DEC1.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.



NCBI GeneID	4140
NCBI Accession #	NP_001122390.1
NCBI GenBank Nucleotide #	NM_001128918.1
UniProt Accession #	P27448; O60219; Q86TT8; Q8TB41; Q8WX83; Q96RG1; Q9UMY9; Q9UN34
Molecular Weight	84,489 Da
NCBI Official Full Name	MAP/microtubule affinity-regulating kinase 3 isoform a
NCBI Official Synonym Full Names	MAP/microtubule affinity-regulating kinase 3
NCBI Official Symbol	MARK3
NCBI Official Synonym Symbols	KP78; CTAK1; PAR1A; Par-1a
NCBI Protein Information	MAP/microtubule affinity-regulating kinase 3; EMK-2; C-TAK1; ELKL motif kinase 2; protein kinase STK10; ser/Thr protein kinase PAR-1; cdc25C-associated protein kinase 1; serine/threonine-protein kinase p78
UniProt Protein Name	MAP/microtubule affinity-regulating kinase 3
UniProt Gene Name	MARK3
UniProt Synonym Gene Names	CTAK1; EMK2; cTAK1; EMK-2; Par-1a
UniProt Entry Name	MARK3_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/mark3-antibody-western-blot-immunohistochemistry-flow-cytometry-elisa/19841>