abcam

Product datasheet

Anti-MCAK antibody [2488C3a] ab50778

KO VALIDATED

2 References 2 Images

Overview

Product name	Anti-MCAK antibody [2488C3a]
Description	Mouse monoclonal [2488C3a] to MCAK
Host species	Mouse
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant human MCAK fragment
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.05% Sodium azide Constituents: 1% BSA, 0.03% Potassium phosphate, 0.812% Sodium chloride, 0.1312% Sodium phosphate, 0.0225% Potassium chloride
Purity	Protein G purified
Purification notes	This antibody was purified using protein G column chromatography from culture supernatant of hybridoma cultured in a medium containing bovine IgG depleted (approximately 95%) fetal bovine serum.
Clonality	Monoclonal
Clone number	2488C3a

Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab50778 in the following tested applications.

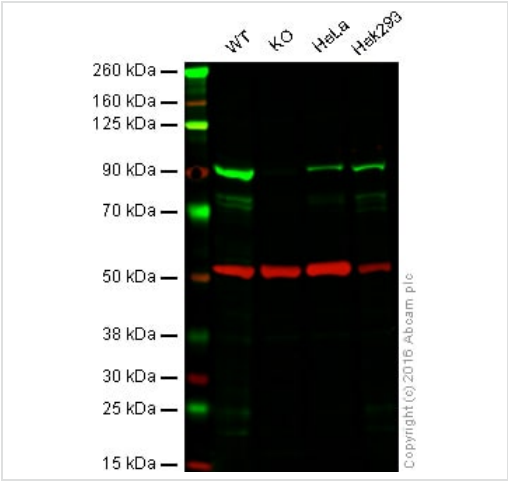
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 81 kDa.

Target

Function	Promotes ATP-dependent removal of tubulin dimers from microtubules. Regulates the turnover of microtubules at the kinetochore and functions in chromosome segregation during mitosis.
Tissue specificity	Expressed at high levels in thymus and testis, at low levels in small intestine, the mucosal lining of colon, and placenta, and at very low levels in spleen and ovary; expression is not detected in prostate, peripheral blood Leukocytes, heart, brain, lung, liver, skeletal muscle, kidney or pancreas. Isoform 2 is testis-specific.
Sequence similarities	Belongs to the kinesin-like protein family. MCAK/KIF2 subfamily. Contains 1 kinesin-motor domain.
Developmental stage	Isoform 2 is expressed in fetal testis.
Domain	The microtubule tip localization signal (MtLS) motif; mediates interaction with MAPRE1 and targeting to the growing microtubule plus ends.
Post-translational modifications	Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylation by STK12, regulates association with centromeres and kinetochores and the microtubule depolymerization activity.
Cellular localization	Cytoplasm > cytoskeleton. Nucleus. Chromosome > centromere. Chromosome > centromere > kinetochore. Associates with the microtubule network at the growing distal tip (the plus-end) of microtubules, probably through interaction with MTUS2/TIP150 and MAPRE1 (By similarity). Centromeric localization requires the presence of BUB1 and SGOL2.

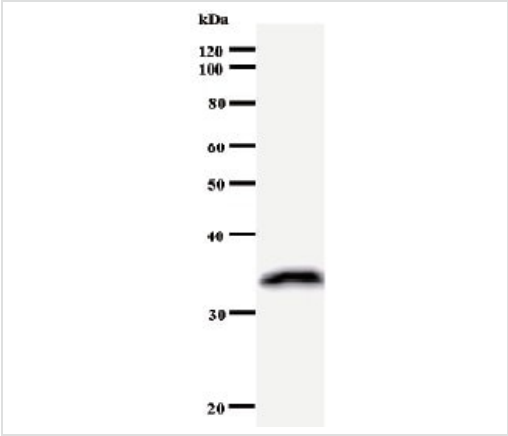
Images



Western blot - Anti-MCAK antibody [2488C3a] (ab50778)

Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: MCAK knockout HAP1 whole cell lysate (20 µg)
Lane 3: HeLa whole cell lysate (20 µg)
Lane 4: HEK293 whole cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab50778 observed at 90 kDa. Red - loading control, **ab176560**, observed at 50 kDa.

ab50778 was shown to specifically react with MCAK when MCAK knockout samples were used. Wild-type and MCAK knockout samples were subjected to SDS-PAGE. Ab50778 and **ab176560** (Rabbit anti alpha Tubulin loading control) were incubated overnight at 4°C at 1 ug/ml and 1/10000 dilution respectively. Blots were developed with 800CW Goat anti Rabbit and 680CW Goat anti Mouse secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-MCAK antibody [2488C3a] (ab50778)

Anti-MCAK antibody [2488C3a] (ab50778) + immunizing peptide

Predicted band size: 81 kDa

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