10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# MCAK Antibody
**Rabbit Polyclonal Antibody**
**Catalog # ABV10579**

## Specification

### MCAK Antibody - Product Information

| | |
|---|---|
| Application | **WB, IP** |
| Primary Accession | Q99661 |
| Other Accession | NP_006836.1 |
| Reactivity | **Human** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **81313** |

### MCAK Antibody - Additional Information

**Gene ID** 11004

Application & Usage: **Western blotting (1:500 – 1:2000) and Immunoprecipitation. HeLa cell lysate can be used as a positive control. However, the optimal concentrations should be determined individually. The antibody recognizes the MCAK of human origin. Reactivity to other species has not been tested.**

**Other Names**
MCAK, Mitotic Centromere-Associated Kinesin, KIF2C, Kinesein Family Member 2C, KNSL6, Kinesin-Like 6, ESTM5

**Target/Specificity**
MCAK

**Antibody Form**
Liquid

**Appearance**
Colorless liquid

**Formulation**
100 µl affinity purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 30% glycerol, 1% BSA and 0.02% thimerosal.

**Handling**
The antibody solution should be gently mixed before use.

**Reconstitution & Storage**
-20 °C

### Background Descriptions

### Precautions
MCAK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## MCAK Antibody - Protein Information

**Name** KIF2C

**Synonyms** KNSL6

### Function
In complex with KIF18B, constitutes the major microtubule plus-end depolymerizing activity in mitotic cells (PubMed:<a href="http://www.uniprot.org/citations/21820309" target="_blank">21820309</a>). Regulates the turnover of microtubules at the kinetochore and functions in chromosome segregation during mitosis (PubMed:<a href="http://www.uniprot.org/citations/19060894" target="_blank">19060894</a>). Plays a role in chromosome congression and is required for the lateral to end- on conversion of the chromosome-microtubule attachment (PubMed:<a href="http://www.uniprot.org/citations/23891108" target="_blank">23891108</a>).

### Cellular Location
Cytoplasm, cytoskeleton. Nucleus {ECO:0000250|UniProtKB:P70096} Chromosome, centromere. Chromosome, centromere, kinetochore. Note=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). Association with microtubule plus ends is also mediated by interaction with KIF18B. Centromeric localization requires the presence of BUB1 and SGO2. {ECO:0000250|UniProtKB:P70096, ECO:0000269|PubMed:17485487, ECO:0000269|PubMed:21820309}

### Tissue Location
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.

## MCAK Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## MCAK Antibody - Images

## MCAK Antibody - Background

Kinesin activity has been linked to various cellular functions such as vesicle transport, mitotic spindle formation, chromosome segregation, chromosome congression, and cytokinesis. Structurally, all kinesins contain a motor domain with microtubule and nucleotide binding sites that utilize ATP to target cargo along microtubule filaments. MCAK (Mitotic Centromere-Associated Kinesin) is the founding member of kinesin-13 proteins. There are 3 independent genes coding for kinesin-13 proteins kif2a, kif2b, and kif2c (MCAK). Instead of functioning as a translocator of microtubules MCAK is a depolymerizer that is primarily responsible for releasing improper microtubule-kinetochore attachments during cell division.