

PRODUCT INFORMATION

Product name : MCAK antibody

Product type : Primary antibodies

Description : Rabbit polyclonal to MCAK

Immunogen : 3 synthetic peptides (human) conjugated to KLH

Reacts with : Human, Mouse

Tested applications : ELISA, WB & IF

GENE INFORMATION

Gene Symbol : KIF2C

Gene Name : kinesin family member 2C

Ensembl ID : ENSG00000142945

Entrez GeneID : 11004

GenBank Accession number : U63743

Swiss-Prot : Q99661

Molecular weight of MCAK : 81kDa

Function : In complex with KIF18B, constitutes the major microtubule plus-end depolymerizing activity in mitotic cells. Regulates the turnover of microtubules at the kinetochore and functions in chromosome segregation during mitosis.

Expected subcellular localization : Cytoplasm › cytoskeleton. Nucleus. 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 SGOL2.

Expected 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.

Summary: The protein encoded by this gene is a member of kinesin-like protein family. Proteins of this family are microtubule-dependent molecular motors that transport organelles within cells and move chromosomes during cell division. This protein is important for anaphase chromosome segregation and may be required to coordinate the onset of sister centromere separation. [provided by RefSeq, Jul 2008]

APPLICATION NOTE

Recommended dilution :

- **ELISA:** Antibody specificity was verified by direct ELISA against the 3 immunogen peptides. A minimum titer of 1/80000 is determined for one of the three peptides. Appropriate specificity controls were run.
- **WB:** 1/500.
- **IF:** 1/50.

Optimal dilutions/concentration should be determined by the end user.

Raised in : Rabbit

Clonality : Polyclonal

Isotype : IgG

Purity : Crude serum, final bleed

Storage buffer : Crude serum

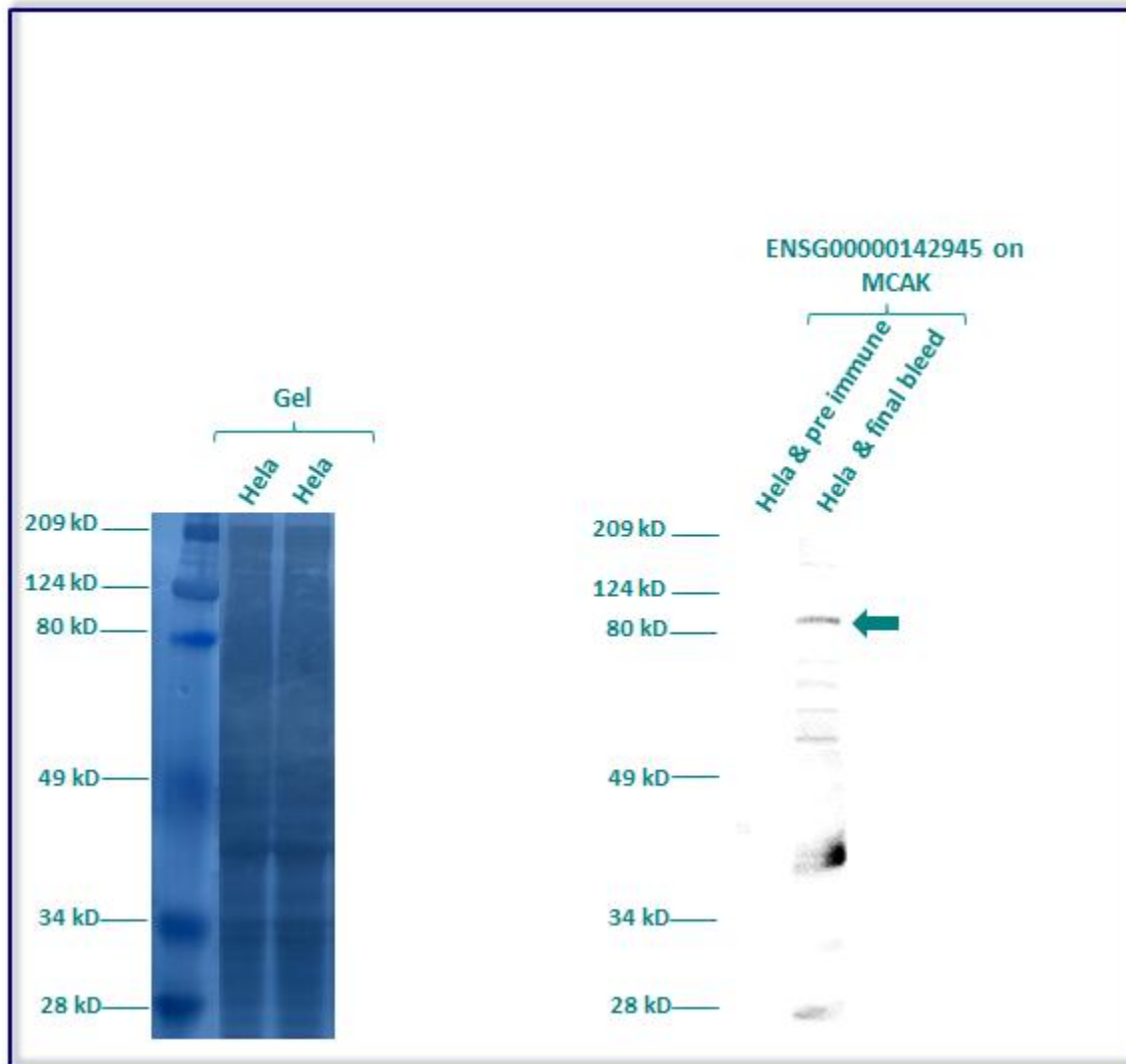
Form : Liquid

Storage instruction : Store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

WESTERN BLOT ON CELL LYSATE

Western blot analysis of MCAK expression in protein extract of HeLa (Human cervix adenocarcinoma) cell line. The serum ENSG00000142945 has been tested at 1/500.

Molecular weight of MCAK : 81kDa.



Gel concentration: 5%

Blocking: in 5% non-fat milk-PBST solution

1st Antibody: The antibodies are diluted in blocking buffer.

- Dilute the serum ENSG00000142945 at 1:500
- 60 minutes of incubation

2nd Antibody: The antibody is diluted in blocking buffer.

- Dilute the anti-Rabbit IgG HRP conjugated at 1/10000
- 60 minutes of incubation

IMMUNOFLUORESCENCE ANALYSIS

Immunofluorescence analysis of Kinesin-like protein KIF2C (MCAK) expression in 5 cells lines (HELA, 293T/17, SAOS-2, SH-SY5Y, Skin 3,44). The crude serum ENSG00000142945 has been tested at 1/100.

Red staining : cytoskeleton (microtubules/ α -tubuline)

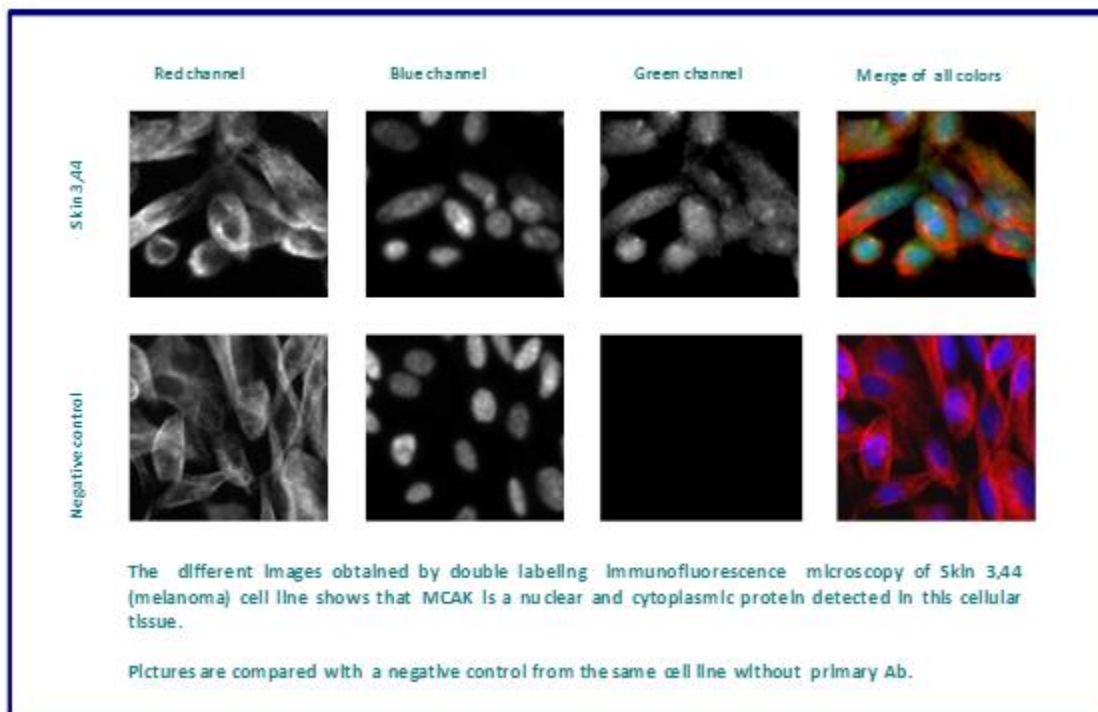
Blue staining : nucleus (Hoechst)

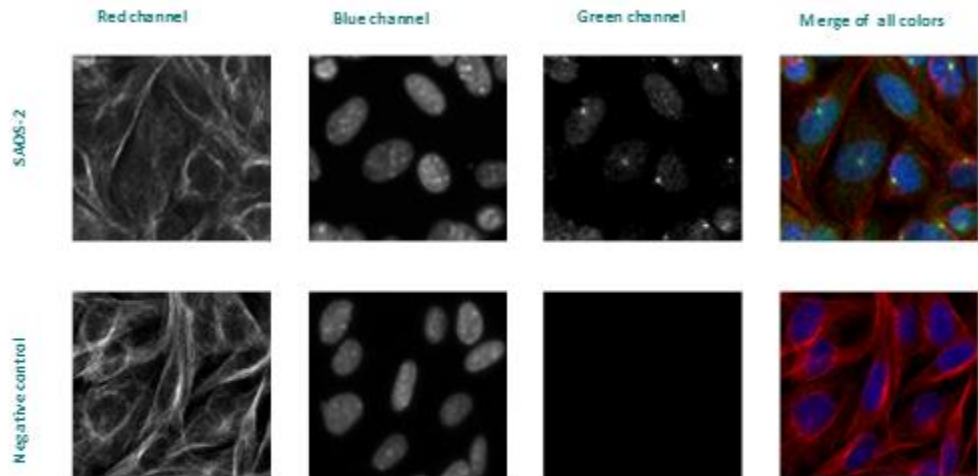
Green staining : anti- MCAK antibody

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The different images obtained by double labeling Immunofluorescence microscopy of SAOS-2 (osteosarcoma) cell line shows that MCAK is a nuclear protein detected in this cellular tissue.

Pictures are compared with a negative control from the same cell line without primary Ab.

Remaining cell lines tested gave a positive result with a nuclear and cytoplasmic distribution.