

# Human CKMT1A antibody

Catalog Number: ATGA0296

## PRODUCT INFORMATION

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**Catalog number**

ATGA0296

**Clone No.**

AT17A2

**Product type**

Monoclonal Antibody

**UnitProt No.**

P12532

**NCBI Accession No.**

NP\_001015001

**Alternative Names**

Creatine kinase u-type mitochondrial, Creatine kinase u-type, mitochondrial, CKMT1; CKMT1B; uMTCK

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human CKMT1A (40-417aa) purified from E. coli

**Isotype**

IgG2b kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB, ICC/IF, FACS

**Usage**

The antibody has been tested by ELISA, Western blot analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results. Recommended starting dilution is 1:1000.

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## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

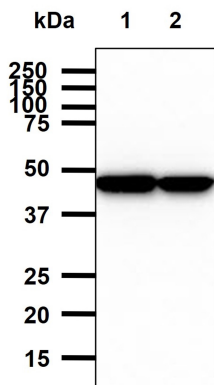
CKMT1A, also known as Creatine kinase, mitochondrial 1A, is 417 amino acid protein. Mitochondrial creatine kinase (MtCK) exists as two isoenzymes, sarcomeric MtCK (CKMT2) and ubiquitous MtCK (CKMT1). It is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. Many malignant cancers with poor prognosis have shown overexpression of ubiquitous mitochondrial creatine kinase; this may be related to high energy turnover and failure to eliminate cancer cells via apoptosis.

### General References

- Haas. R.C., et al. (1989) J Biol Chem 264(5): 2890-2897  
Stachowiak. O., et al. (1998) Mol Cell Biochem 184(1-2): 141-151  
Lipskaya. T.Y. (2001) Biochemistry Mosc 66(10): 1098-1111

## DATA

### Western blot analysis (WB)

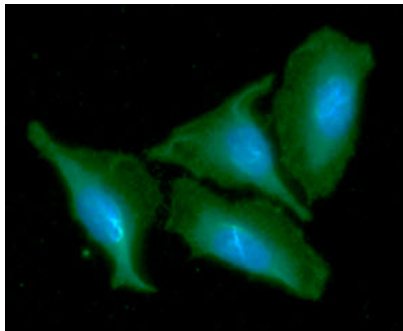


The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human CKMT1A antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1.: 293T cell lysate

Lane 2.: HeLa cell lysate

### Immunocytochemistry/Immunofluorescence (ICC/IF)

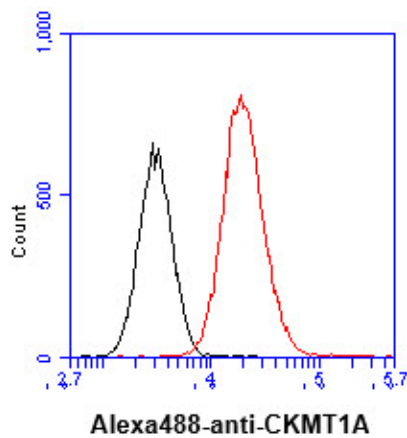


ICC/IF analysis of CKMT1A in HeLa cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human CKMT1A antibody (1:100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).

### Flow cytometry (FACS)

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Flow cytometry analysis of CKMT1A in HeLa cell line, staining at 2-5ug for 1x10<sup>6</sup> cells (red line). The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate. Isotype control antibody was mouse IgG (black line).