Human CKMT1A antibody

Catalog Number: ATGA0296

PRODUCT INFORMATION

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

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

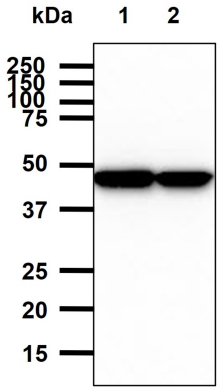
CKMT1A, also known as Creatine kinase, mitochondrial 1A, is 417 amino acid protein. Mitochondrial creatine kinase (MtCK) exists as two isoenzymes, sarcomeric MtCK (CKMT2) and ubiquitous MtCK (CKMT1). It is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, 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

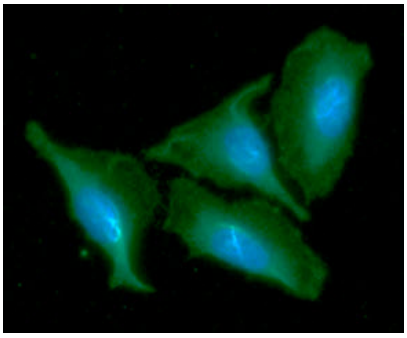
DATA

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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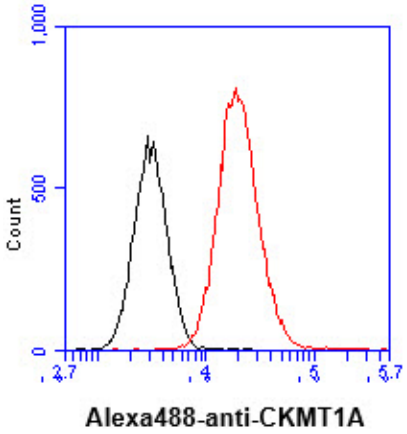

Flow cytometry analysis of CKMT1A in HeLa cell line, staining at 2-5ug for 1x106cells (red line). The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate. Isotype control antibody was mouse IgG (black line).