

Human PKM antibody

Catalog Number: ATGA0325

PRODUCT INFORMATION

Catalog number

ATGA0325

Clone No.

AT1B10

Product type

Monoclonal Antibody

UnitProt No.

P14618

NCBI Accession No.

NP_002645

Alternative Names

Pyruvate kinase muscle isoform M2, Pyruvate kinase M1/2, Pyruvate kinase muscle, Cytosolic thyroid hormone-binding protein, CTHBP, Pyruvate kinase 2/3, Threonine-protein kinase PKM2, Thyroid hormone-binding protein 1, THBP1, Opa-interacting protein 3, OIP3, Tumor M2-PK, Tyrosine-protein kinase PKM2, PK2, PK3, PKM2, p58

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 PKM2 (1-531aa) purified from E.coli

Isotype

IgG1 kappa

Purification Note

By protein-A affinity chromatography

Application

ELISA, WB, ICC/IF

Usage

The antibody has been tested by ELISA, Western blot analysis and Immunofluorescence 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 for Western blot analysis is 1:1000 and

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Immunofluorescence is 1:250.

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

PKM2 (pyruvate kinase M2), its association with phospho-tyrosine (pTyr) motifs, enables cells to use predominantly aerobic glycolysis instead of oxidative phosphorylation. Also PKM2 suggest that this change benefits cancer cells by enabling them to redirect glycolytic metabolites away from oxidation and energy production and, instead, toward anabolic processes and biosynthesis. PKM2-mediated generation of the aerobic glycolytic phenotype, although wasteful in terms of glucose consumption and waste generation, could provide a variety of advantages for cancerous cells. In addition nuclear translocation of the tumor marker pyruvate kinase M2 induces programmed cell death.

General References

Ferguson E.C., et al. (2008) Trends Biochem Sci 33(8): 359-362.

Christofk H.R., et al. (2008) Nature 452(7184):181-186.

Shimada N., et al. (2008) Genes Cells 13(3): 245-254.

DATA

Western blot analysis (WB)

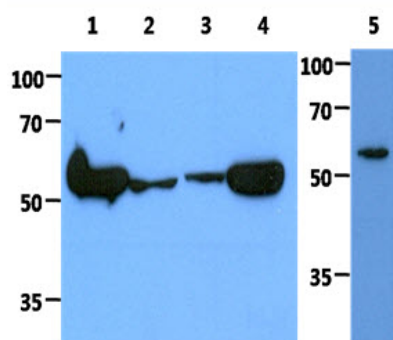


Fig.1: The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human PKM2 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1 : HeLa cell lysate

Lane 2 : Jurkat cell lysate

Lane 3 : MCF7 cell lysate

Lane 4 : A549 cell lysate

Lane 5 : 293T cell lysate

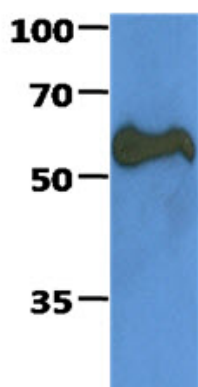
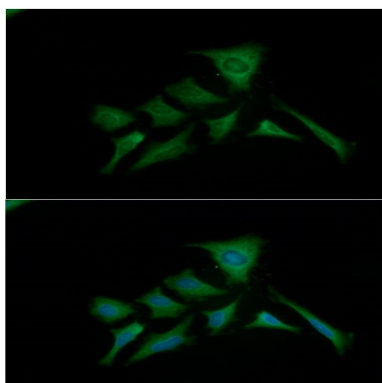


Fig 2: The Recombinant human PKM2 (50ng) protein was resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human PKM2 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

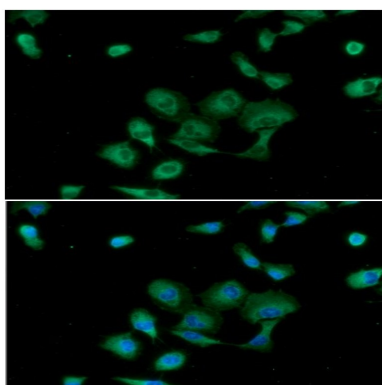
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Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of PKM2 in HeLa cells. The cell was stained with ATGA0325 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).



ICC/IF analysis of PKM2 in A549 cells. The cell was stained with ATGA0325 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).