Human Inorganic Pyrophosphatase/PPA1 antibody

Catalog Number: ATGA0433

PRODUCT INFORMATION

Catalog number
ATGA0433

Clone No.
AT4G4

Product type
Monoclonal Antibody

UnitProt No.
Q15181

NCBI Accession No.
NP_066952

Alternative Names
Inorganic pyrophosphatase, IOPPP, PP, PP1, SID6-8061

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 PPA1 (1-289aa) purified from E. coli

Isotype
IgG2b Lambda

Purification Note
By protein-A affinity chromatography

Application
ELISA, WB, ICC/IF, FACS

Usage
The antibody has been tested by ELISA, Western blot analysis, Flow cytometry and ICC/IF to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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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

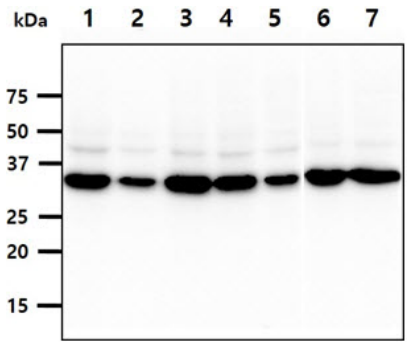
PPA1 (Pyrophosphatase) belongs to the PPase family. This protein is an enzyme that catalyzes the conversion of one molecule of pyrophosphate to two phosphate ions. The hydrolysis of inorganic pyrophosphate (PPi) to two phosphate ions is utilized in many biochemical pathways to render reactions effectively irreversible. Inorganic pyrophosphatase catalyzes this hydrolysis reaction in the early steps of lipid degradation, a prominent example of this phenomenon. By promoting the rapid hydrolysis of pyrophosphate (PPi), Inorganic pyrophosphatase provides the driving force for the activation of fatty acids destined for oxidation.

General References

Carman GM, et al., (2006) Trends Biochem. Sci. 31(12): 694-9.
Usui Y, et al., (2010) J. Dent. Res. 89(5): 504-9.

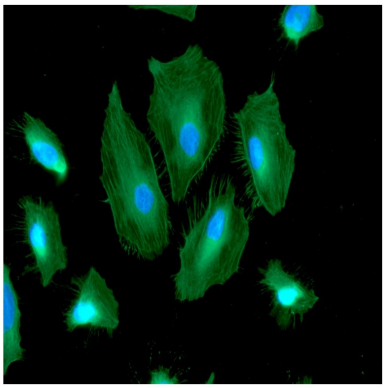
DATA

Western blot analysis (WB)



The cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human PPA1 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. : A431 cell lysate
Lane 3. : 293T cell lysate
Lane 4. : HepG2 cell lysate
Lane 5. : U87MG cell lysate
Lane 6. : PC3 cell lysate
Lane 7. : WiDr cell lysate

Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of Pyrophosphatase/PPA1 in HeLa cells. The cell was stained with ATGA0433 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).

Flow cytometry (FACS)

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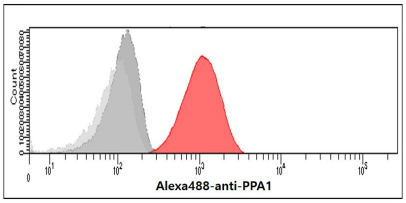

Flow cytometry analysis of Pyrophosphatase/PPA1 in HeLa cells. The cell was stained with ATGA0433 at 2-5ug for 1x10^6cells (red). A Goat anti mouse IgG (Alexa fluor 488) was used as the secondary antibody. Mouse monoclonal IgG was used as the isotype control (dark gray), cells without incubation with primary and secondary antibody was used as the negative control (light gray).