# **PRODUCT INFORMATION**

Catalog number ATGA0213

Clone No. AT2C7

**Product type** Monoclonal Antibody

**UnitProt No.** Q9NVS9

NCBI Accession No. NP\_060599

Alternative Names Pyridoxine-5-phosphate oxidase, FLJ10535, PDXPO

## **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 PNPO (57-261aa) purified from E. coli

# Isotype

lgG1 kappa

**Purification Note** By protein-G affinity chromatography

## Application

ELISA,WB,ICC/IF,IHC,FACS

#### Usage

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



#### 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

PNPO (pyridoxamine 5'-phosphate oxidase) is a 261 amino acid protein belonging to the pyridoxamine 5'phosphate oxidase family. It is the rate-limiting enzyme in vitamin B6 synthesis. Vitamin B6 (Pyridoxal 5-primephosphate or PLP) is vital for normal cellular function, and some cancer cells have notable differences in vitamin B6 metabolism compared to their normal counterparts. Vitamin B6 is a required co-factor for enzymes involved in both homocysteine metabolism and synthesis of neurotransmitters such as catecholamine.

#### **General References**

Ngo EO, et al. (Jun 1998). Biochemistry 37 (21): 7741-8. Mills PB, Surtees RA, et al. (2005). Hum. Mol. Genet. 14 (8): 1077-86. Kang JH, et al. (Jun 2004). Eur J Biochem 271 (12): 2452-61.

#### DATA

### Western blot analysis (WB)



The Cell lysates (40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human PNPO antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system. Lane 1.: A549 cell lysate Lane 2.: HepG2 cell lysate

#### Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of PNPO in Hep3B cells. The cell was stained with ATGA0213 (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 PNPO in Jurkat cells. The cell was stained with ATGA0213 at 2-5ug for 1x10<sup>6</sup>cells (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).

## Immunohistochemistry (IHC)



Paraffin embedded sections of human breast cancer tissue were incubated with anti-human PNPO (1:150) for 2 hours at room temperature. Antigen retrieval was performed in 0.1M sodium citrate buffer and detected using Diaminobenzidine(DAB)