

## Anti-ALDH7A1 Antibody (5P692)

## Product Details

|               |              |
|---------------|--------------|
| Ig Type:      | Rabbit IgG   |
| Reactivity:   | Human        |
| Conjugation:  | Unconjugated |
| Clone:        | 5P692        |
| Purification: | Protein A    |

## Applications

|                    |  |
|--------------------|--|
| Verified Activity: | <p>1. Immunofluorescence staining of Human ALDH7A1 in Hela cells. Cells were fixed with 4% PFA, permeabilized with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with rabbit anti-Human ALDH7A1 monoclonal antibody (1:60) at 37°C 1 hour. Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to cytoplasm.</p> <p>2. Flow cytometric analysis of Human ALDH7A1 expression on HepG2 cells. The cells were treated according to manufacturer's manual (BD Pharmingen™ Cat. No. 554714), stained with purified anti-Human ALDH7A1, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.</p> |
| Application:       | FCM, ICC/IF  |
| Recommended        | ICC-IF: 1:20-1:100; FCM: 1:25-1:100  |

## Properties

|                      |  |
|----------------------|--|
| Stability & Storage: | Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free. |
| Shipping:            | Shipping with blue ice.  |

## Antigen Details

|                  |   |
|------------------|---|
| Immunogen:       | Recombinant Protein: Human ALDH7A1 protein (TMPY-01588) |
| Antigen Species: | Human   |
| Synonyms:        | EPD;PDE;aldehyde dehydrogenase 7 family, member A1;ATQ1 |

## Research Background

ALDH7A1 (Aldehyde dehydrogenase 7 family, member A1) is a member of subfamily 7 in the aldehyde dehydrogenase family. These enzymes are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. Mammalian ALDH7A1 is homologous to plant ALDH7B1 which protects against various forms of stress such as increased salinity, dehydration and treatment with oxidants or pesticides. In mammals, ALDH7A1 is known to play a primary role during lysine catabolism through the NAD<sup>+</sup>-dependent oxidative conversion of aminoadipate semialdehyde (AASA) to its corresponding carboxylic acid,  $\alpha$ -aminoadipic acid. Deleterious mutations in human ALDH7A1 are responsible for pyridoxine-dependent and folinic acid-responsive seizures. ALDH7A1 is a novel aldehyde dehydrogenase expressed in multiple subcellular compartments that protects against hyperosmotic stress by generating osmolytes and metabolizing toxic aldehydes.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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