# Mouse anti-Human ALDH1A1 Monoclonal Antibody | anti-ALDH1A1 antibody

Anti-ALDH1A1 Antibody (PE), Mouse Monoclonal

| CATALOG # | HOST | REACTIVITY | APPLICATIONS |
|---|---|---|---|
| **AAA255411** | **Mouse** | **Human** | **Flow Cytometry, Functional Assay** |

## PRODUCT SYNONYMS

ALDH1A1; Monoclonal Antibody; Anti-ALDH1A1 Antibody (PE); Mouse Monoclonal; ALDH1A1/ALDH1 Antibody (PE); Mouse MAb; aldehyde dehydrogenase 1 family; member A1; Anti-ALDC Antibody; Anti-ALDH-E1 Antibody; Anti-ALDH1 Antibody; Anti-ALDH11 Antibody; Anti-HEL-9 Antibody; Anti-HEL-S-53e Antibody; Anti-HEL12 Antibody; Anti-PUMB1 Antibody; Anti-RALDH1 Antibody; anti-ALDH1A1 antibody

## PRODUCT SPECIFICATIONS

| | |
|---|---|
| **Host** | Mouse |
| **Reactivity** | Human |
| **Clonality** | Monoclonal |
| **Isotype** | Mouse IgG1 |
| **Clone Number** | 03 |
| **Specificity** | Human ALDH1A1/ALDH1 |
| **Purity/Purification** | Protein A |
| **Form/Format** | PBS solution containing 0.5% BSA and 0.03% ProClin300 |
| **Concentration** | 5ul/Test, 0.1mg/ml (varies by lot) |
| **Applicable Applications for anti-ALDH1A1 antibody** | FCM/FACS (Flow Cytometry) |
| **Immunogen** | Recombinant Human ALDH1A1 / ALDH1 protein (Catalog# ) |
| **Reagents** | PE-conjugated Mouse monoclonal antibody |
| **Preparation** | This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Human ALDH1A1 / ALDH1 (rh ALDH1A1 / ALDH1; Catalog# NP_000680.2; Ser2-Ser501) and conjugated with PE under optimum conditions, the unreacted PE was remove. |
| **Preparation and Storage** | This antibody can be stored at 2°C-8°C for twelve months without detectable loss of activity. Protected from prolonged exposure to light. Do not freeze |

## IMAGES

**Application Data**
Profile of anti-Human ALDH1A1 reactivity on A549 cells analyzed by flow cytometry.Flow cytometry was performed on a BD FC Calibur flow cytometry system.

## ADDITIONAL INFORMATION

| | |
|---|---|
| **Related Product Information for anti-ALDH1A1 antibody** | Aldehyde dehydrogenase 1 family, member A1 (ALDH1A1), also known as Aldehyde dehydrogenase 1 (ALDH1), or Retinaldehyde Dehydrogenase 1 (RALDH1), is an enzyme that is expressed at high levels in stem cells and that has been suggested to regulate stem cell function. The retinaldehyde dehydrogenase (RALDH) subfamily of ALDHs, composed of ALDH1A1, ALDH1A2, ALDH1A3, and ALDH8A1, regulate development by catalyzing retinoic acid biosynthesis. The ALDH1A1 protein belongs to the aldehyde dehydrogenases family of proteins. Aldehyde dehydrogenase is the second enzyme of the major oxidative pathway of alcohol metabolism. ALDH1A1 also belongs to the group of corneal crystallins that help maintain the transparency of the cornea. Increased ALDH1A1 activity has been found in the stem cell populations of leukemia and some solid tumors. In tumor specimens, increased ALDH1A1 immunopositivity was found not only in secretory type cancer epithelial cells but also in neuroendocrine tumor populations. ALDH1 has been identified as a reliable marker of breast cancer stem cells. ALDH1 expression in primary cancer is an independent prognostic factor in node-positive breast cancer patients. ALDH1A1 plays a key role in normal hematopoiesis, and as a TLX1 transcriptional target, ALDH1A1 may contribute to the ability of this homeoprotein to alter cell fate and induce tumor growth. |
| **References** | Li T, et al. (2010). ALDH1A1 is a marker for malignant prostate stem cells and predictor of prostate cancer patients' outcome. Lab Invest. 90(2): 234-44.Levi BP, et al. (2009) Aldehyde dehydrogenase 1a1 is dispensable for stem cell function in the mouse hematopoietic and nervous systems. Blood. 113(8): 1670-80.Rahman FB, et al. (2006) Uncompetitive inhibition of Xenopus laevis aldehyde dehydrogenase 1A1 by divalent cations. Zoolog Sci. 23(3): 239-44.Jester JV, et al. (1999). The cellular basis of corneal transparency: evidence for corneal crystallins. J Cell Sci. 112 (Pt 5): 613-22. |

## NCBI AND UNIPROT INFORMATION

| | |
|---|---|
| **NCBI GI #** | 21361176 |
| **NCBI GeneID** | 216 |
| **NCBI Accession #** | NP_000680.2 |
| **NCBI GenBank Nucleotide #** | NM_000689.4 |
| **UniProt Accession #** | P00352; O00768; Q5SYR1 |
| **Molecular Weight** | 54,862 Da |
| **NCBI Official Full Name** | retinal dehydrogenase 1 |
| **NCBI Official Synonym Full Names** | aldehyde dehydrogenase 1 family, member A1 |
| **NCBI Official Symbol** | ALDH1A1 |
| **NCBI Official Synonym Symbols** | ALDC; ALDH1; HEL-9; HEL12; PUMB1; ALDH11; RALDH1; ALDH-E1; HEL-S-53e |
| **NCBI Protein Information** | retinal dehydrogenase 1; ALDH class 1; ALHDII; RALDH 1; acetaldehyde dehydrogenase 1; aldehyde dehydrogenase 1, soluble; aldehyde dehydrogenase, liver cytosolic; epididymis luminal protein 12; epididymis luminal protein 9; epididymis secretory sperm bindi |
| **UniProt Protein Name** | Retinal dehydrogenase 1 |
| **UniProt Gene Name** | **ALDH1A1** |
| **UniProt Synonym Gene Names** | ALDC; ALDH1; PUMB1; RALDH 1; RalDH1 |
| **UniProt Entry Name** | AL1A1_HUMAN |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

**AAA Biotech** | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: https://stage.aaabiotech.com/monoclonal/aldh1a1-antibody-clone-03-flow-cytometry-elisa/255411