
Product Name: ALDH1A1 Mouse Monoclonal Antibody**Catalog #: AMM80892**

For research use only.

Summary

Description	Mouse monoclonal Antibody
Host	Mouse
Application	WB,IHC,ELISA
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Mouse IgG1
Clonality	Monoclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Purified antibody in PBS with 0.05% sodium azide.
Purification	Affinity Purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:200-1:1000,ELISA 1:5000-1:20000
Molecular Weight	55kDa

Antigen Information

Gene Name	ALDH1A1
Alternative Names	ALDC; ALDH1; PUMB1; ALDH11; RALDH1; ALDH-E1; MGC2318; ALDH1A1
Gene ID	216.0
SwissProt ID	P00352
Immunogen	Purified recombinant fragment of human ALDH1A1 expressed in E. Coli.

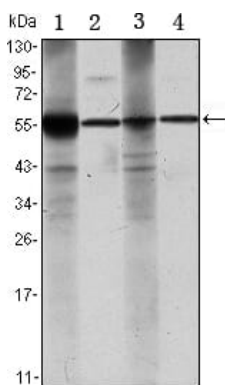
Background

ALDH1A1 is an aldehyde dehydrogenase able to oxidize a wide variety of aliphatic aldehydes (retinaldehyde, acetaldehyde, etc.) to the corresponding carboxylic acids (retinoic acid, acetic acid, etc.). ALDH1A1 (also known as RALDH1, ALDH1, or AHD2) is highly expressed in the dorsal retina, ventral midbrain (dopaminergic neurons), and hematopoietic stem cells. ALDH1A1 is

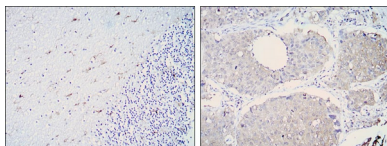
involved in retinoic acid (RA) synthesis during vertebrate embryogenesis. ALDH1A1 is first detected at E9.0-E10.5 in cranial tissues (ventral mesencephalon, dorsal retina, thymic primordia, optic vesicles) and in the mesonephros. ALDH1A1 is also of interest in Parkinson's Disease (PD) being expressed in the the A9 dopaminergic (DA) neuronal group projecting to the dorsal striatum; this is the most vulnerable site in PD (Chung et al, 2005). ALDH1A1 protein is a known mesencephalic dopaminergic marker. ALDH1A1 is a cytosolic enzyme that preferentially oxidizes retinaldehyde to retinoic acid .ALDH1A1 is expressed in the epithelium of many organs, including brain, liver, testis, eye lens and cornea .ALDH1A1 is highly expressed in brain dopaminergic neurons, where it produces the retinoic acid required for their differentiation and development .The retinoic acid produced by ALDH1A1 is also important for the differentiation of hematopoietic stem cells.

Research Area

Image Data



Western blot analysis using ALDH1A1 mouse mAb against Raji (1), Jurkat (2), THP-1 (3) and K562 (4) cell lysate.



Immunohistochemical analysis of paraffin-embedded human cerebellum tissues (left) and lung cancer (right) using ALDH1A1 mouse mAb with DAB staining.