

ALDH1A1 Monoclonal Antibody

Description

Product type	Antibody
Code	BT-MCA3847
Host	Mouse
Isotype	Mouse IgG1
Size	100µL, 50µL
Immunogen	Purified recombinant fragment of human ALDH1A1 expressed in E. Coli.
Mol wt	55kDa
Species reactivity	Human
Clonality	Monoclonal
Recommended application	WB,IHC
Concentration	N/A
Full name	N/A
Synonyms	ALDC;ALDH1;PUMB1;ALDH11;RALDH1;ALDH-E1;MGC2318;ALDH1A1

This product is for research use only, not for use in human, therapeutic or diagnostic procedure.

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 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.

Recommended Dilution

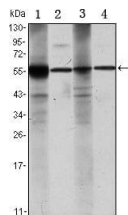
WB: 1:500 - 1:2000

IHC-p: 1:200 - 1:1000

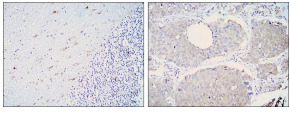
ELISA: 1:10000

Not yet tested in other applications.

Images



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 cerebellum tissues (left) and lung cancer (right) using ALDH1A1 mouse mAb with DAB staining.

Storage

Store at 4°C short term. Aliquot and store at -20°C long term.

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