

ALDH1A1 monoclonal antibody

Catalog: MB21374

Host: Mouse

Reactivity: Human

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 nea. 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.

Product:

Purified antibody in PBS with 0.05% sodium azide.

Molecular Weight:

55kDa

Swiss-Prot:

P00352

Purification&Purity:

The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immuno-

gen and the purity is > 95% (by SDS-PAGE).

Applications:

WB:1/500 - 1/2000 IHC:1/200 - 1/1000

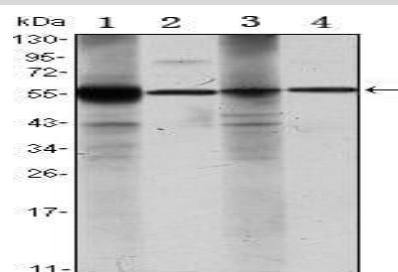
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

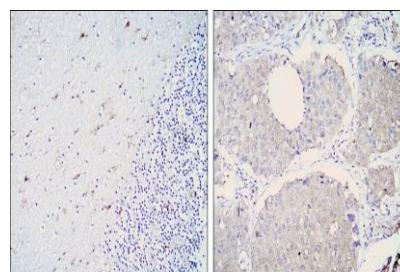
Isotype:

Mouse IgG1

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.

Note:

For research use only, not for use in diagnostic procedure.

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