

Product datasheet for **AM06513SU-N**

ALDH1A1 Mouse Monoclonal Antibody [Clone ID: 5A11]

Product data:

Product Type:	Primary Antibodies
Clone Name:	5A11
Applications:	ELISA, IHC, WB
Recommended Dilution:	ELISA: 1/10000. Western Blot: 1/500 - 1/2000. Immunohistochemistry on Paraffin Sections: 1/200 - 1/1000.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Purified recombinant fragment of Human ALDH1A1 expressed in E. Coli.
Specificity:	Recognizes ALDH1A1
Formulation:	State: Ascites State: Ascitic fluid containing 0.03% Sodium Azide.
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	55 kDa
Gene Name:	aldehyde dehydrogenase 1 family member A1
Database Link:	Entrez Gene 216 Human P00352



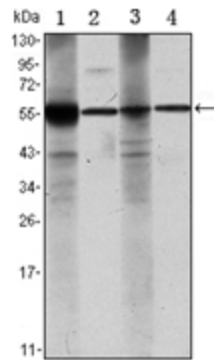
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Background:

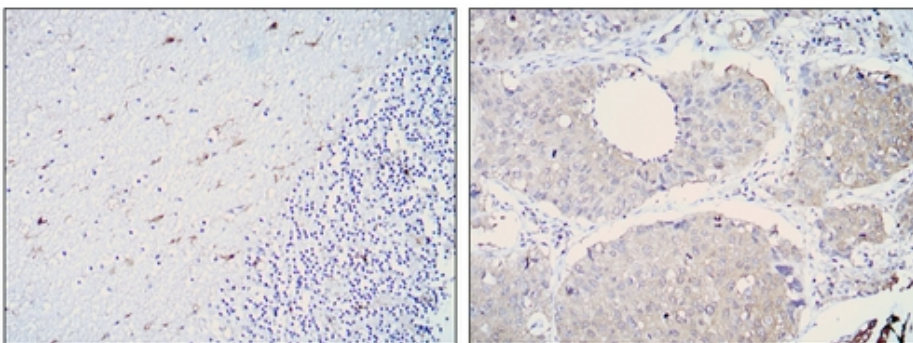
ALDH1A1 is an aldehyde dehydrogenase able to oxidize a wide variety of aliphatic aldehydes (retinaldehyde, acetaldehyde, etc.) to the corresponding carboxylic acids (retinoic acid, acetic acid, etc.). ALDH1A1 (also known as RALDH1, ALDH1, or AHD2) is highly expressed in the dorsal retina, ventral midbrain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

Synonyms:

Retinal dehydrogenase 1, RALDH1, ALDH1A1, ALDC, PUMB1, Aldehyde dehydrogenase cytosolic, ALHDII, ALDH-E1

Product images:

Western blot analysis using ALDH1A1 antibody Cat.-No AM06513SU-N 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 antibody Cat.-No AM06513SU-N with DAB staining.