


PRODUCT INFORMATION SHEET

Mouse Monoclonal Antibody to ALDH1A1

Format: PURE RUO REF IQP-1467P Volume: 100µl

 Description	
Clone	5A11
Isotype	Mouse IgG1
Specificity	ALDH1A1
Alternative names	ALDC; ALDH1; PUMB1; ALDH11; RALDH1; ALDH-E1; MGC2318; ALDH1A1
Species	Human
Immunogen	Purified recombinant fragment of human ALDH1A1 expressed in E. Coli.
Mw	55kDa
Format	Ascitic fluid containing 0.03% sodium azide

Summary 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.

Applications ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000

Limitations

1. Conjugates with brighter fluorochromes, like PE and APC, will have a greater separation than those with dyes like FITC and CyQ. When populations overlap, the percentage of positive cells using a selected marker can be affected by the choice of fluorescent label.
2. Use of monoclonal antibodies in patient treatment can interfere with antigen target recognition by this reagent. This should be taken into account when samples are analyzed from patients treated in this fashion. IQ Products has not characterized the effect of the presence of therapeutic antibodies on the performance of this reagent.
3. Reagents can be used in different combinations, therefore laboratories need to become familiar performance characteristics of each antibody in relation with the combined markers in normal and abnormal samples.
4. Reagent data performance is based on EDTA-treated blood. Reagent performance can be affected by the use of other anticoagulants.



Handling and Storage

Store the vials at 2-8 °C for a maximum of 2 weeks and store at -20°C for longer term storage. Monoclonal antibodies should be protected from prolonged exposure to light when conjugated with fluorochromes. Reagents are stable for the period shown on the vial label when stored properly.

Warranty Products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the description on the label of the product. IQ Products is not liable for property damage, personal injury, or economic loss caused by the product.

Characterization












To ensure consistently high-quality reagents, each batch of monoclonal antibody is tested for conformance with characteristics of a standard reagent.

Warning All products contain sodiumazide. This chemical is poisonous and hazardous. Handling should be done by trained staff only.

References

1. J Hum Genet. 2009 Jun;54(6):317-23.
2. J Hum Genet. 2009 Oct;54(10):564-71.
3. J Neurosci Res. 2010 Feb 15;88(3):686-94.

Explanation of used symbols

	Consult instructions for use
	Catalogue number
	Sufficient for
	Caution, consult accompanying document
	Keep away from (sun)light
	Biological risks
	Temperature limitation (°C)
	For Research Use Only
	Batch code
	Use by yyyy-mm-dd
	Manufacturer

		Label - tandem	Ex -max (nm)	Em -max (nm)
P	PURE	purified material	-	-
F	FITC	FITC	488	519
R	R-PE	PE	488, 532	578
C	CyQ	PE-Cy5.18	488, 532	667
A	APC		595, 633, 635, 647	660
PC	PerCP		488, 532	678
PCC	PerCP-Cy5.5		488, 532	695



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