

10-7595: Monoclonal antibody to ALDH1A1 (Clone: ABM5F21)

Clonality :	Monoclonal
Clone Name :	ABM5F21
Application :	FACS,WB
Reactivity :	Human
Gene :	ALDH1A1
Gene ID :	216
Uniprot ID :	P00352
Format :	Purified
Alternative Name :	ALDH1A1,ALDC,ALDH1,PUMB1
Isotype :	Mouse IgG2a Kappa
Immunogen Information :	A partial length recombinant protein of ALDH1A1 (amino acid 300-500) was used as the immunogen for this antibody.

Description

Aldehyde dehydrogenase 1A1 (ALDH1A1) is a member of a superfamily of detoxification enzymes found in various tissues that participate in the oxidation of both aliphatic and aromatic aldehydes. The human ALDH1A1, which is tetrameric and predominantly of cytosolic origin, functions mainly in acetaldehyde and neurotransmitter metabolism. It is also reported to play a major role in the production of retinoic acid, which is important for gene expression and tissue differentiation, and also in cyclophosphamide detoxification. ALDH1A1 is found in various tissues, including the central nervous system (CNS), with highest levels in the liver. In the brain, ALDH1A1 participates in the metabolism of catecholamines including dopamine (DA) and norepinephrine, and is uniquely expressed in a subset of dopaminergic (DAergic) neurons in the ventral mesencephalon where it converts 3,4-dihydroxyphenylacetaldehyde, a potentially toxic aldehyde, to 3,4-dihydroxyphenylacetic acid, a non toxic metabolite. ALDH1A1 has been implicated in the development of alcohol dependence and other alcohol-use disorders, alcohol-induced flushing and sensitivity to alcohol.

Product Info

Amount :	25 µg / 100 µg
Purification :	Protein G Chromatography
Content :	25 µg in 50 µl/100 µg in 200 µl PBS containing 0.05% BSA and 0.05% sodium azide. Sodium azide is highly toxic.
Storage condition :	Store the antibody at 4°C; stable for 6 months. For long-term storage; store at -20°C. Avoid repeated freeze and thaw cycles.

Application Note

Western blot analysis: 2-4 µg/ml, FACS analysis: 0.5-1 µg/10⁶ Cells

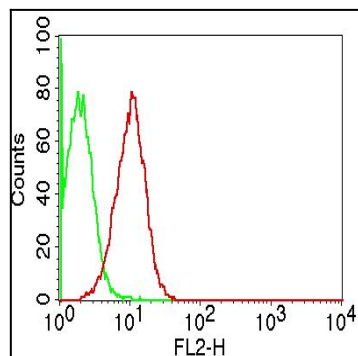


Figure-1: Intracellular flow analysis of ALDH1A1 on HepG2 cells using 0.5 $\mu\text{g}/10^6$ cells of ALDH1A1 antibody (Clone: ABM5F21). Green represents isotype control; red represents anti-ALDH1A1 antibody. Goat anti-mouse PE conjugate was used as secondary antibody.

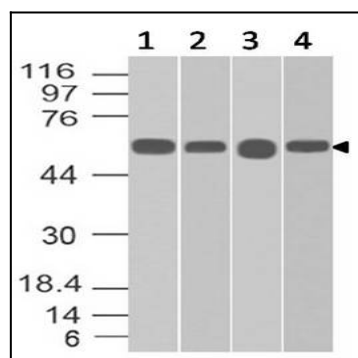


Figure-2: Expression analysis of ALDH1A1. Anti- ALDH1A1 antibody (Clone: ABM5F21) was tested at 2 $\mu\text{g}/\text{ml}$ on (1) A549, (2) h Testis, (3) h Liver and (4) h Intestine lysates.