

Technical Data Sheet

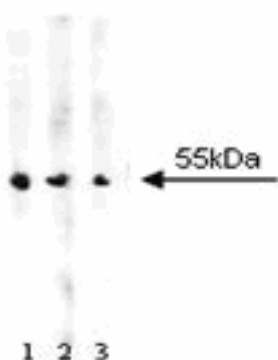
Purified Mouse Anti-ALDH

Product Information

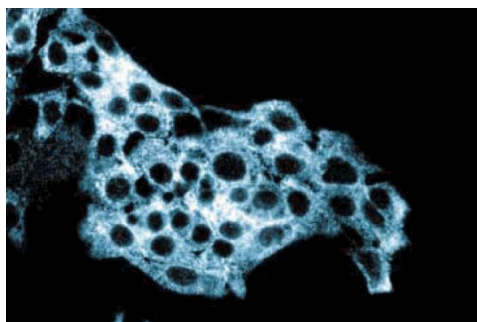
Material Number:	611195
Size:	150 µg
Concentration:	250 µg/ml
Clone:	44/ALDH
Immunogen:	Human ALDH1 aa. 7-128
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	55 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Aldehyde dehydrogenase (ALDH) is a ubiquitous enzyme located in nearly all mammalian tissues. It catalyzes the irreversible oxidation of a range of aliphatic and aromatic aldehydes to their corresponding carboxylic acids. There are multiple isoforms of ALDH which are subdivided into three classes. Class I includes the cytosolic isoforms. Class II includes the mitochondrial isoforms. Class III includes the microsomal, cytosolic tumor specific, and cytosolic dioxin-inducible forms. At least twelve human ALDH isoforms have been identified. Mutations of many of these proteins such as ALDH1, ALDH2, ALDH4, and ALDH10 have been implicated in multiple human metabolic disorders and clinical abnormalities. At the amino acid level, human ALDH isoforms exhibit a wide range of diversity (15% to about 80%). However, multiple protein regions have been highly conserved and are important for functional activities. A well-characterized member of the human ALDH family is ALDH1. It plays a major role in the biosynthesis of retinoic acid from retinol (vitamin A). Retinoic acid, the biologically active form of retinol, is a regulator of cellular proliferation, differentiation, and survival.



*Western blot analysis of ALDH on A431 cell lysate.
Lane 1: 1:500, lane 2: 1:1000, lane 3: 1:2000 dilution of
anti-ALDH antibody.*



*Immunofluorescent staining of HepG2 cells with
anti-ALDH.*

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Reported

Recommended Assay Procedure:

For Western blot: Please refer to http://www.bdbiosciences.com/support/resources/cell_biology/index.jsp

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611447	A431 Cell Lysate	500 µg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Greene WK, Bahn S, Masson N, Rabbitts TH. The T-cell oncogenic protein HOX11 activates Aldh1 expression in NIH 3T3 cells but represses its expression in mouse spleen development. *Mol Cell Biol.* 1998; 18(12):7030-7037. (Biology)
Kathmann EC, Lipsky JJ. Cloning of a cDNA encoding a constitutively expressed rat liver cytosolic aldehyde dehydrogenase. *Biochim Biophys Acta.* 1997; 236(2):527-531. (Biology)
Yoshida A, Rzhetsky A, Hsu LC, Chang C. Human aldehyde dehydrogenase gene family. *J Biol Chem.* 1998; 273(3):549-557. (Biology)
Zhou JH, Hanna EY, Roberts D, Weber RS, Bell D. ALDH1 immunohistochemical expression and its significance in salivary adenoid cystic carcinoma. *Head & Neck.* 2012; 35(4):575-578. (Clone-specific: Immunohistochemistry)

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