

For Research Use Only

ALDH1A1 Recombinant antibody, PBS Only (Detector)

Catalog Number:83830-2-PBS



Basic Information

Catalog Number: 83830-2-PBS	GenBank Accession Number: BC001505	Purification Method: Protein A purification
Size: 100ug , Concentration: 1 mg/ml by Nanodrop;	GeneID (NCBI): 216	CloneNo.: 240995F4
Source: Rabbit	UNIPROT ID: P00352	
Isotype: IgG	Full Name: aldehyde dehydrogenase 1 family, member A1	
Immunogen Catalog Number: AG8665	Calculated MW: 501 aa, 55 kDa	
	Observed MW: 50-55 kDa	

Applications

Tested Applications:
WB, IHC, Cytometric bead array, Sandwich ELISA, Indirect ELISA, Sample test

Species Specificity:
human, mouse

Product Information

83830-2-PBS targets ALDH1A1 as part of a matched antibody pair:

MP00795-1: 83830-1-PBS capture and 83830-2-PBS detection (validated in Cytometric bead array)

MP00795-2: 83830-3-PBS capture and 83830-2-PBS detection (validated in Sandwich ELISA)

Unconjugated rabbit recombinant monoclonal antibody in PBS only (BSA and azide free) storage buffer at a concentration of 1 mg/mL, ready for conjugation. Created using Proteintech's proprietary in-house recombinant technology. Recombinant production enables unrivalled batch-to-batch consistency, easy scale-up, and future security of supply.

This conjugation ready format makes antibodies ideal for use in many applications including: ELISAs, multiplex assays requiring matched pairs, mass cytometry, and multiplex imaging applications. Antibody use should be optimized by the end user for each application and assay.

Background Information

ALDH1A1 (Aldehyde dehydrogenase family 1 member A1), also named as ALDC, ALDH1 and PUMB1, belongs to the aldehyde dehydrogenase family. The ALDH1A1 gene encodes a liver cytosolic isoform of acetaldehyde dehydrogenase, an enzyme involved in the major pathway of alcohol metabolism after alcohol dehydrogenase. ALDH1A1 plays a critical role in protection against oxidative stress-induced cytotoxicity in lens epithelial cells (PMID:19296407). And it is important for multiple biological activities including drug resistance, cell differentiation, and oxidative stress response (PMID:19025616). As a novel cancer stem cell marker, ALDH1A1 can be used for tumors whose corresponding normal tissues express ALDH1 in relatively restricted or limited levels such as breast, lung, ovarian or colon cancer (PMID: 20422001).

Storage

Storage:
Store at -80°C.

Storage Buffer:
PBS Only

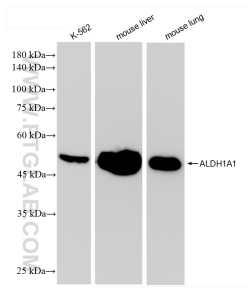
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

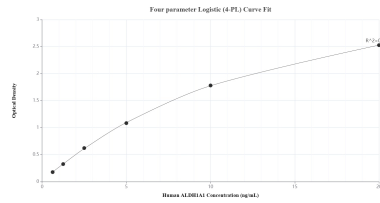
E: proteintech@ptglab.com
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

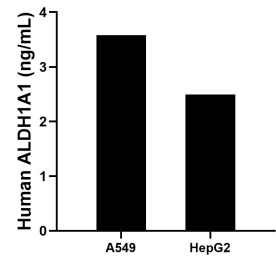
Selected Validation Data



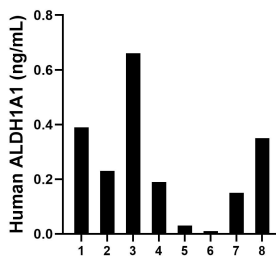
Various lysates were subjected to SDS PAGE followed by western blot with 83830-2-RR (ALDH1A1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 83830-2-PBS in a different storage buffer formulation.



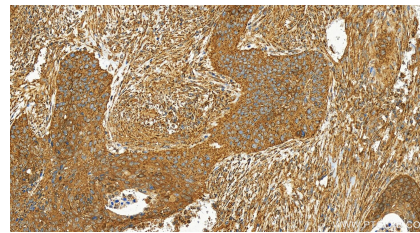
Sandwich ELISA standard curve of MP00795-2, Human ALDH1A1 Recombinant Matched Antibody Pair - PBS only. 83830-3-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Ag8665. 83830-2-PBS was HRP conjugated as the detection antibody. Range: 0.625-20 ng/mL



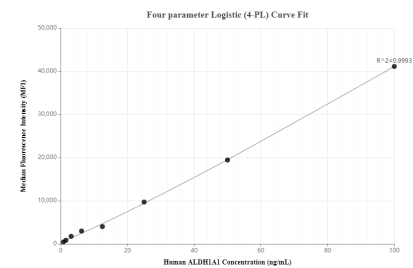
The mean ALDH1A1 concentration was determined to be 3.58 ng/mL in A549 cell extract based on a 1.00 mg/mL extract load and 2.49 ng/mL in HepG2 cell extract based on a 1.20 mg/mL extract load.



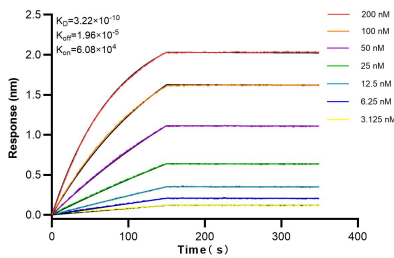
Serum of eight individual healthy human donors was measured. The ALDH1A1 concentration of detected samples was determined to be 0.25 ng/mL with a range of 0.01-0.66 ng/mL



Immunohistochemical analysis of paraffin-embedded human cervical squamous cancer tissue slide using 83830-2-RR (ALDH1A1 antibody) at dilution of 1:200 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0). This data was developed using the same antibody clone with 83830-2-PBS in a different storage buffer formulation.



Cytometric bead array standard curve of MP00795-1, ALDH1A1 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 83830-1-PBS. Detection antibody: 83830-2-PBS. Standard: Ag8665. Range: 0.781-100 ng/mL



Bi-layer interferometry (BLI) kinetic assays of 83830-2-RR against Human ALDH1A1 were performed. The affinity constant is 0.322 nM.