

ALDH1A3 Polyclonal Antibody

Catalog NumberPA5-29188

Product data sheet

Details		Species Reactivity	
Size	100 µL	Species reactivity	Human, Mouse, Rat
Host/Isotope	Rabbit / IgG	Published species	Human, Not Applicable
Class	Polyclonal	Tested Applications	
Type	Antibody	Immunohistochemistry (Paraffin) (IHC (P))	1:100-1:1,000
Immunogen	Recombinant fragment corresponding to a region within amino acids 126 and 423 of Human ALDH1A3	Western Blot (WB)	1:500-1:3,000
		Immunocytochemistry (ICC/IF)	1:100-1:1,000
Conjugate	Unconjugated	Published Applications	
Form	Liquid	Western Blot (WB)	See 1 publications below
Concentration	0.1 mg/mL	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Purification	Antigen affinity chromatography		
Storage buffer	PBS, pH 7, with 20% glycerol, 1% BSA		
Contains	0.025% ProClin 300		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

Product specific information

Recommended positive controls: A431, Huh-7, U87-MG. Predicted reactivity: Mouse (95%), Rat (95%), Xenopus laevis (83%), Chicken (88%), Rhesus Monkey (98%). Store product as a concentrated solution. Centrifuge briefly prior to opening the vial.

Background/Target Information

ALDH1A3 are aldehyde dehydrogenase isozymes which are thought to play a major role in the detoxification of aldehydes generated by alcohol metabolism and lipid peroxidation. The enzyme encoded by the ALDH1A3 gene uses retinal as a substrate, either in a free or cellular retinol-binding protein form.

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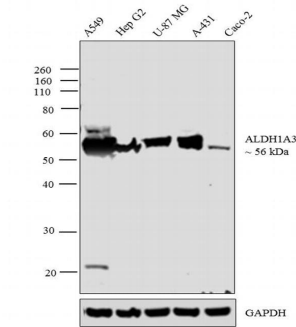
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Product Images For ALDH1A3 Polyclonal Antibody

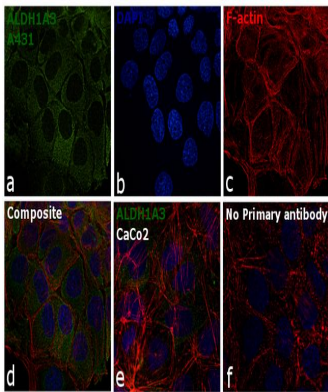
ALDH1A3 Antibody (PA5-29188) in WB

Western blot analysis was performed on whole cell extracts (30 µg lysate) of A549 (Lane 1), Hep G2 (Lane 2), U-87 MG (Lane 3), A-431 (Lane 4) and Caco-2 (Lane 5). The blot was probed with Anti-ALDH1A3 Polyclonal Antibody (Product # PA5-29188, 1:2,000 dilution) and detected by chemiluminescence using Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, HRP conjugate (Product # A27036, 0.25 µg/mL, 1:4,000 dilution). A 56 kDa band corresponding to ALDH1A3 was detected across the cell lines tested except for Caco-2 which is reported to have lower expression for ALDH1A3 expression.



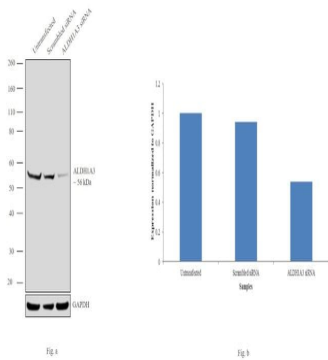
ALDH1A3 Antibody (PA5-29188)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Immunofluorescence analysis using ALDH1A3 Polyclonal Antibody (Product # PA5-29188) showed expression of ALDH1A3 in A-431 as compared to Caco-2. {RE}



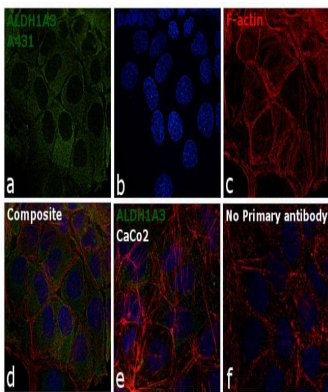
ALDH1A3 Antibody (PA5-29188)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. Hep G2 cells were transfected with ALDH1A3 siRNA and reduction of signal was observed in Western Blot using ALDH1A3 Polyclonal Antibody (Product # PA5-29188). {KD}



ALDH1A3 Antibody (PA5-29188) in ICC/IF

Immunofluorescence analysis of ALDH1A3 was performed using 70% confluent log phase A-431 cells. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with ALDH1A3 Polyclonal Antibody (Product # PA5-29188) at 5 µg/mL in 0.1% BSA, incubated at 4 degree Celsius overnight and then labeled with Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A27034) at a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415). Panel d represents the merged image showing cytoplasmic localization. Panel e represents Caco-2 cells having lower expression of ALDH1A3. Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



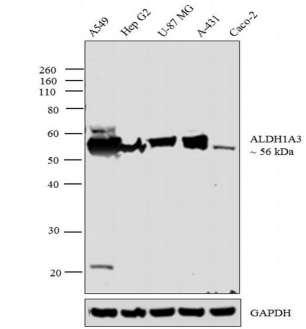
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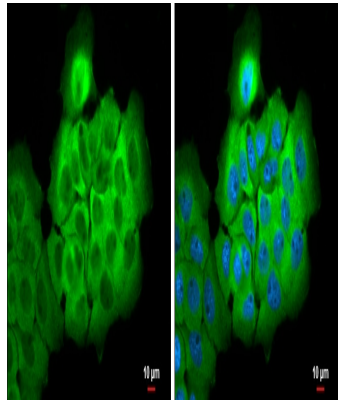
ALDH1A3 Antibody (PA5-29188)

Antibody specificity was demonstrated by detection of differential basal expression of the target across cell models owing to their inherent genetic constitution. Expression of ALDH1A3 Polyclonal Antibody was not observed specifically in Caco-2 using Anti-ALDH1A3 Polyclonal Antibody (Product # PA5-29188) in Western Blot. {RE}



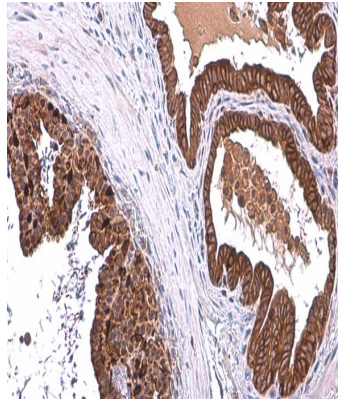
ALDH1A3 Antibody (PA5-29188) in ICC/IF

Immunocytochemistry-Immunofluorescence analysis of ALDH1A3 was performed in A431 cells fixed in 4% paraformaldehyde at RT for 15 min. Green: ALDH1A3 Polyclonal Antibody (Product # PA5-29188) diluted at 1:500. Blue: Hoechst 33342 staining. Scale bar = 10 μ m.



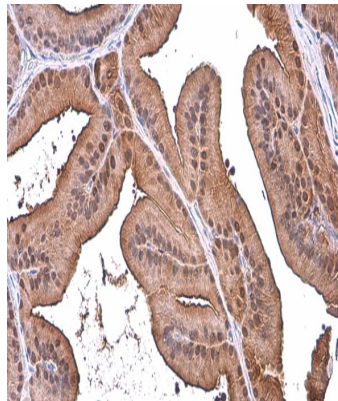
ALDH1A3 Antibody (PA5-29188) in IHC (P)

Immunohistochemistry (Paraffin) analysis of ALDH1A3 was performed in paraffin-embedded mouse prostate tissue using ALDH1A3 Polyclonal Antibody (Product # PA5-29188) at a dilution of 1:500. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.



ALDH1A3 Antibody (PA5-29188) in IHC (P)

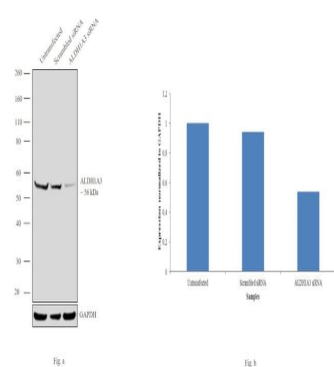
Immunohistochemistry (Paraffin) analysis of ALDH1A3 was performed in paraffin-embedded rat prostate tissue using ALDH1A3 Polyclonal Antibody (Product # PA5-29188) at a dilution of 1:500. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.



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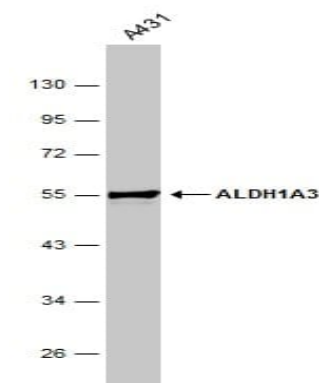
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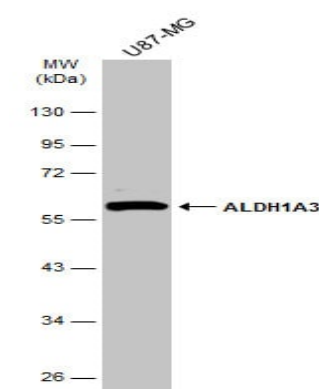
ALDH1A3 Antibody (PA5-29188) in WB

Knockdown of ALDH1A3 was achieved by transfecting Hep G2 cells with ALDH1A3 specific siRNAs (Silencer® select Product # s32, s30). Western blot analysis (Fig. a) was performed using whole cell extracts from the ALDH1A3 knockdown cells (lane 3), non-specific scrambled siRNA transfected cells (lane 2) and untransfected cells (lane 1). The blots were probed with ALDH1A3 Polyclonal Antibody (Product # PA5-29188, 1:2,000 dilution) and Goat anti-Rabbit IgG (Heavy Chain) Superclonal™ Secondary Antibody, HRP conjugate (Product # A27036, 0.25 µg/mL, 1:4,000 dilution). Densitometric analysis of this western blot is shown in histogram (Fig. b). Decrease in signal upon siRNA mediated knock down confirms that antibody is specific to ALDH1A3.



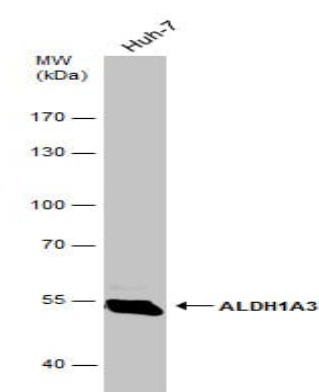
ALDH1A3 Antibody (PA5-29188) in WB

Western blot analysis of ALDH1A3 was performed by separating 30 µg of whole cell extract by 10% SDS-PAGE. Proteins were transferred to a membrane and probed with a ALDH1A3 Polyclonal Antibody (Product # PA5-29188) at a dilution of 1:1000. The HRP-conjugated anti-rabbit IgG antibody was used to detect the primary antibody.



ALDH1A3 Antibody (PA5-29188) in WB

Western blot analysis of ALDH1A3 was performed by separating 30 µg of whole cell extract by 10% SDS-PAGE. Proteins were transferred to a membrane and probed with a ALDH1A3 Polyclonal Antibody (Product # PA5-29188) at a dilution of 1:1000. The HRP-conjugated anti-rabbit IgG antibody was used to detect the primary antibody.



ALDH1A3 Antibody (PA5-29188) in WB

Western Blot analysis of ALDH1A3 was performed by separating 30 µg of Whole cell extracts by 7.5% SDS-PAGE. Proteins were transferred to a membrane and probed with a ALDH1A3 Polyclonal Antibody (Product # PA5-29188) at a dilution of 1:2000.

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PubMed References For ALDH1A3 Polyclonal Antibody

1 Western Blot References

Species / Dilution	Summary
	PA5-29188 was used in Western Blotting to provide a rich, multi-faceted summary of the molecular mechanisms impacted by STAT3 deletion and provide new insight for STAT3's potential as a therapeutic target in ovarian cancer.
Human / Not Cited	<p>Theranostics (2020; 9: 5478)</p> <p>"Multi-omics profiling reveals key signaling pathways in ovarian cancer controlled by STAT3."</p> <p>Author(s):Lu T,Bankhead A,Ljungman M,Neamati N</p> <p>PubMed Article URL:http://dx.doi.org/10.7150/thno.33444</p>

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