

Product Datasheet

ALDH1A3 Antibody - BSA Free NBP2-15339

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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NBP2-15339

ALDH1A3 Antibody - BSA Free

Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	56 kDa

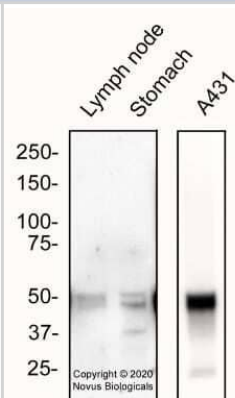
Product Description	
Description	Novus Biologicals Rabbit ALDH1A3 Antibody - BSA Free (NBP2-15339) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and Simple Western. Anti-ALDH1A3 Antibody: Cited in 52 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	220
Gene Symbol	ALDH1A3
Species	Human, Mouse, Rat
Reactivity Notes	Use in Mouse reported in scientific literature (PMID:34572374). Mouse reactivity reported in scientific literature (PMID: 28249000). Chicken (88%)., Xenopus laevis (83%). .
Immunogen	Recombinant protein encompassing a sequence within the center region of human ALDH1A3. The exact sequence is proprietary.

Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Immunoblotting, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen
Recommended Dilutions	Western Blot 1:500 - 1:3000, Simple Western, Immunohistochemistry 1:100 - 1:1000, Immunocytochemistry/ Immunofluorescence 1:100 - 1:1000. Use reported by customer review, Immunohistochemistry-Paraffin 1:100 - 1:1000, Immunohistochemistry-Frozen reported by customer review and in scientific literature (PMID 26713822), Immunoblotting reported in scientific literature (PMID 27572106)

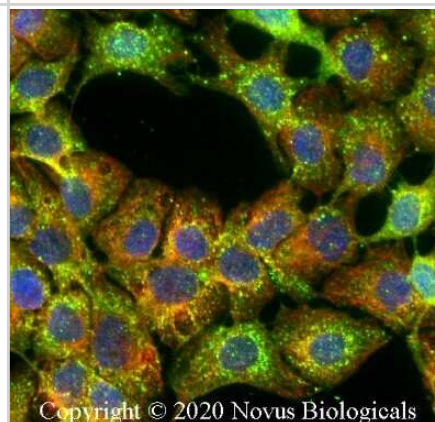


Images

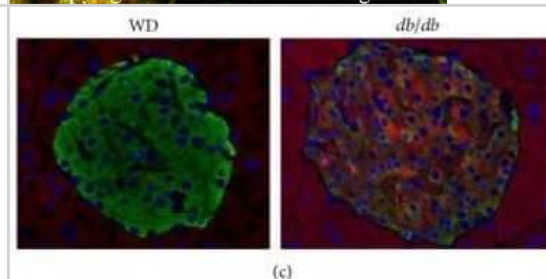
Western Blot: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Total protein from human Lymph node, mouse Stomach and A431 cells was separated on a 7.5% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-ALDH1A3 (NBP2-15339) in blocking buffer and detected with an anti-rabbit HRP secondary antibody using chemiluminescence.



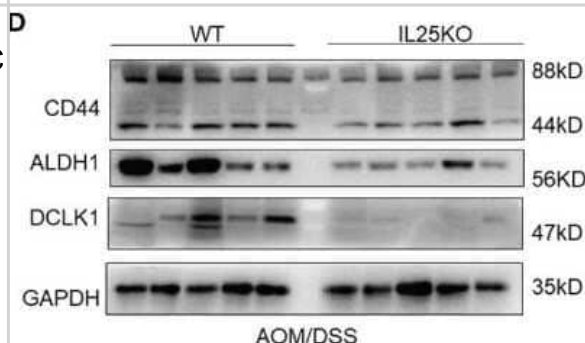
Immunocytochemistry/Immunofluorescence: ALDH1A3 Antibody - BSA Free [NBP2-15339] - A431 cells were fixed for 10 minutes using 4% PFA and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton-X100. The cells were incubated with anti-ALDH1A3 at 2 ug/ml overnight at 4C and detected with an anti-rabbit Dylight 488 (Green) at a 1:500 dilution. Alpha tubulin (DM1A) NB100-690 was used as a co-stain at a 1:1000 dilution and detected with an anti-mouse Dylight 550 (Red) at a 1:500 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.



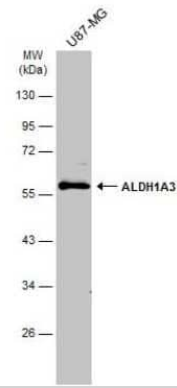
Immunohistochemistry: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Markers of dedifferentiation are present in islets of db/db, but not weight-matched WD-fed mice. Staining for Aldh1a3 protein (red) and insulin (green) in islets from weight-matched WD-fed mice (20 weeks on diet) versus db/db mice (14 weeks of age). Image collected and cropped by CiteAb from the following publication (<https://www.hindawi.com/journals/jdr/2017/8503754/>) licensed under a CC-BY license.



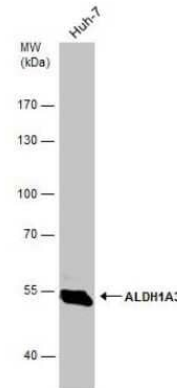
Western Blot: ALDH1A3 Antibody - BSA Free [NBP2-15339] - IL25 Deficiency Induced loss of CRC stemness. The expression levels of CSC markers, namely, DCLK1, ALDH1 (NBP2-15339), and CD44, were examined in tumor tissues by Western blotting. Image collected and cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/35359953/>) licensed under a CC-BY license.



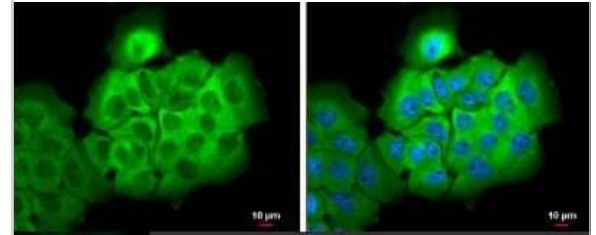
Western Blot: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Whole cell extract (30 ug) was separated by 10% SDS-PAGE, and the membrane was blotted with ALDH1A3 antibody [N2C2], diluted at 1:1000. The HRP-conjugated anti-rabbit IgG antibody (NBP2-19301) was used to detect the primary antibody.



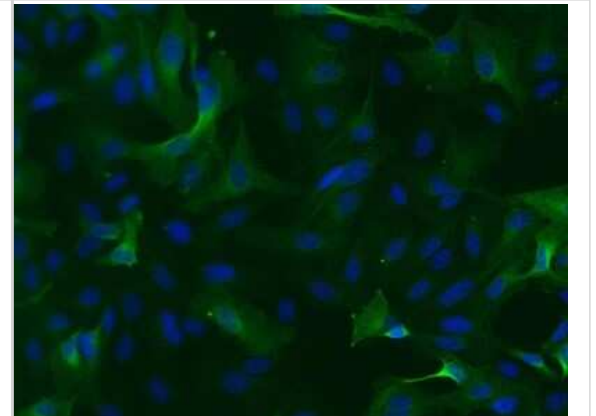
Western Blot: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Whole cell extract (30 ug) was separated by 7.5% SDS-PAGE, and the membrane was blotted with ALDH1A3 antibody [N2C2], diluted at 1:2000.



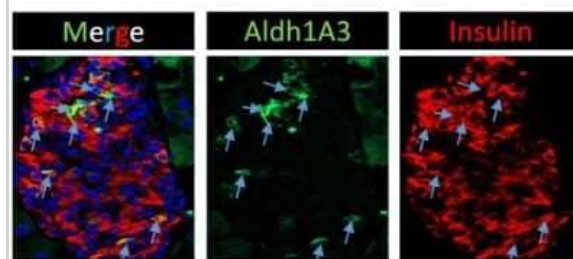
Immunocytochemistry/Immunofluorescence: ALDH1A3 Antibody - BSA Free [NBP2-15339] - A431 cells were fixed in 4% paraformaldehyde at RT for 15 min. Green: ALDH1A3 stained by ALDH1A3 antibody [N2C2], diluted at 1:500. Blue: Hoechst 33342 staining.



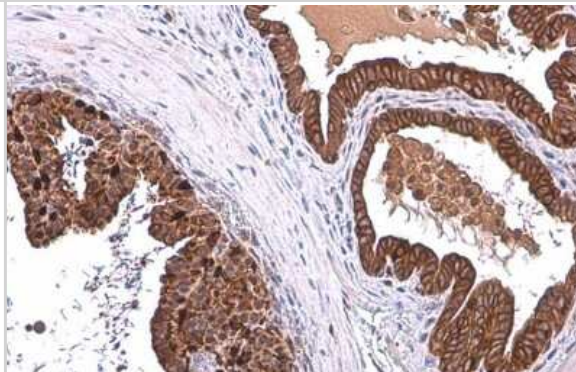
Immunocytochemistry/Immunofluorescence: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Human breast cancer cells with Aldh1a3 overexpression were stained at 1:500 in 5% goat serum in PBS-T. Human breast cancer cells were transduced with human Aldh1a3 and probed with antibody at 1:500 overnight at 4C followed by counterstaining with secondary and DAPI. Strong signal observed compared to knockout controls. ICC/IF image submitted by a verified customer review.



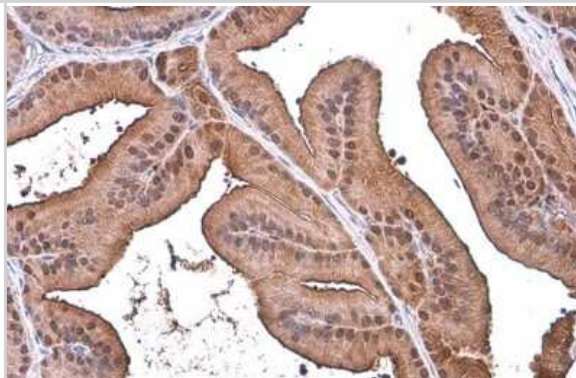
Immunohistochemistry-Frozen: ALDH1A3 Antibody - BSA Free [NBP2-15339] - 8-week old mouse pancreas cryosections with beta cell dedifferentiation properties were stained with ALDH1A3 (1:500 dilution) and Insulin (1:1000 dilution) antibodies. Blue arrows indicate insulin +Aldh1A3+ cells. IHC-Fr image submitted by a verified customer review.



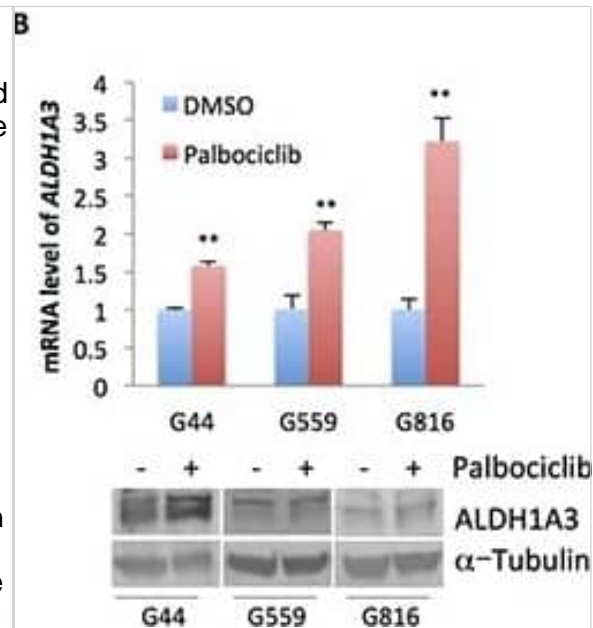
Immunohistochemistry-Paraffin: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Mouse prostate. ALDH1A3 stained by ALDH1A3 antibody [N2C2], diluted at 1:500. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.



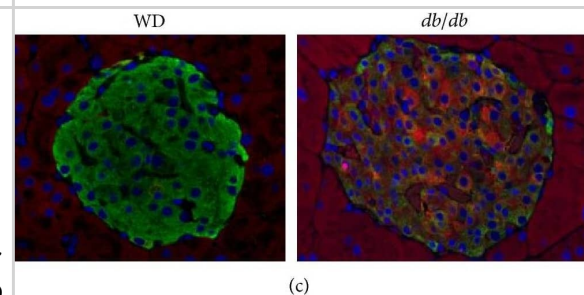
Immunohistochemistry-Paraffin: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Rat prostate. ALDH1A3 stained by ALDH1A3 antibody [N2C2], diluted at 1:500. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.



Western Blot: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Palbociclib induces a potential transition of PN GSCs to MES GSCs(A) qPCR analysis of markers of PN & MES subtypes in G44 & G559 treated with the indicated doses of palbociclib for 5 days. n = 3. Differences were analyzed between the control & the palbociclib-treated groups. NS: not statistically significant; #p < 0.05; *p < 0.01; **p < 0.001. (B) qPCR & immunoblot analysis of ALDH1A3 in three independent PN GSC lines that were treated with 10 nM of palbociclib for 5 days. n = 3. Differences were analyzed between the control & the palbociclib-treated groups. NS: not statistically significant; #p < 0.05; *p < 0.01; **p < 0.001. (C) Cell proliferation analysis of three independent PN GSC lines that were treated with palbociclib (10 nM), DEAB (25 μ M), or both for 5 days. The cells were cultured on a laminin (10 μ g/ml in poly ornithine)-coated 96-well plate. Cell number was determined by CyQUANT Direct Cell Proliferation assay. n = 3. *p < 0.05, comparison between palbociclib or DEAB treatment with the vehicle control; #p < 0.05, comparison between combination group with palbociclib treatment. G44, CDI = 0.79; G559, CDI = 0.565; G816, CDI = 0.677. Shown are representative data of three independent experiments with similar results. Image collected & cropped by CiteAb from the following publication (<https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.19429>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Immunocytochemistry/ Immunofluorescence: ALDH1A3 Antibody - BSA Free [NBP2-15339] - Markers of dedifferentiation are present in islets of db/db, but not weight-matched WD-fed mice. (a) Immunofluorescent analysis of islets from weight-matched WD-fed mice (top row) & db/db mice (bottom row) showing Nkx6.1 (red), insulin (green), & DAPI (blue). In the merged image, note the loss of double-positive nuclei (DAPI plus Nkx6.1; purple color) in the db/db mice but not in the WD-fed mice. (b) Expression of the *Aldh1a3* gene in islets isolated from mice fed a WD for 4 or 12 weeks normalized to mice fed a control diet compared with db/db mice at 8 weeks of age (normalized to lean db/+ controls). □□□p < 0.001 versus both WD groups by one-way ANOVA. (c) Staining for *Aldh1a3* protein (red) & insulin (green) in islets from weight-matched WD-fed mice (20 weeks on diet) versus db/db mice (14 weeks of age). Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29038790>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Li J, Deng Y, Gasser M et al. LONP1 regulation of mitochondrial protein folding provides insight into beta cell failure in type 2 diabetes. *Nature metabolism* 2025-07-21 [PMID: 40691304]

Li Z, Wu X, Kang Q et al. Alpha cells transdifferentiate into delta cells during the progression of autoimmunity in non-diabetic NOD mice. *American journal of physiology. Endocrinology and metabolism* 2025-09-26 [PMID: 41006055]

Chen Z, Will R, Kim SN et al. Novel Function of Cancer Stem Cell Marker ALDH1A3 in Glioblastoma: Pro-Angiogenesis through Paracrine PAI-1 and IL-8 Cancers (Basel) 2023-09-04 [PMID: 37686698] (Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Human)

L Lei, Y Huan, Q Liu, C Li, H Cao, W Ji, X Gao, Y Fu, P Li, R Zhang, Z Abliz, Y Liu, S Liu, Z Shen Morus alba L. (Sangzhi) Alkaloids Promote Insulin Secretion, Restore Diabetic beta-Cell Function by Preventing Dedifferentiation and Apoptosis *Frontiers in Pharmacology*, 2022-03-03;13(0):841981. 2022-03-03 [PMID: 35308210] (Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Human)

Casteels T, Zhang Y, Frogne T Et al. An inhibitor-mediated beta cell dedifferentiation model reveals distinct roles for FoxO1 in glucagon repression and insulin maturation *Molecular metabolism* 2021-08-25 [PMID: 34454092] (Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Human)

Rubio-Navarro A, Gomez-Banoy N, Stoll L et al. A beta cell subset with enhanced insulin secretion and glucose metabolism is reduced in type 2 diabetes *Nature cell biology* 2023-03-16 [PMID: 36928765] (Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Human)

Wang Z, Mohan R, Chen X, Matson K et Al. microRNA-483 Protects Pancreatic β -Cells by Targeting ALDH1A3 *Endocrinology* 2021-02-10 [PMID: 33564883]

Ramzy A, Edeer N, Baker RK, O'Dwyer S et Al. Insulin Null β -cells Have a Prohormone Processing Defect That Is Not Reversed by AAV Rescue of Proinsulin Expression *Endocrinology* 2022-04-18 [PMID: 35435956]

Wang Y, Ni Q, Sun J et Al. Paraneoplastic β Cell Dedifferentiation in Nondiabetic Patients with Pancreatic Cancer *J Clin Endocrinol Metab* 2021-01-04 [PMID: 31781763]

Kang F, Zhang Z, Fu H et Al. β -cell dedifferentiation in HOMA- β low and HOMA- β high subjects *J Clin Endocrinol Metab* 2024-08-12 [PMID: 39133811]

Wei Q, Liu Z, Zhu J et Al. The Ubiquitin E3 Ligase FBXO33 Suppresses Stem Cell-Like Properties and Metastasis in Non-Small-Cell Lung Cancer by Promoting Ubiquitination and Degradation of Myc *Front Biosci (Landmark Ed)* 2024-08-29 [PMID: 39206900]

Yin Q, Ni Q, Wang Y et Al. Raptor determines β -cell identity and plasticity independent of hyperglycemia in mice *Nat Commun* 2020-05-21 [PMID: 32439909]

More publications at <http://www.novusbio.com/NBP2-15339>



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Products Related to NBP2-15339

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

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