

Datasheet for ABIN7118460

anti-RDH10 antibody[Go to Product page](#)**1** Validation**1** Publication

Overview

Quantity:	100 µg
Target:	RDH10
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This RDH10 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP)

Product Details

Immunogen:	retinol dehydrogenase 10(all-trans)
Isotype:	IgG
Purification:	Immunogen affinity purified
Purity:	≥95 % as determined by SDS-PAGE

Target Details

Target:	RDH10
Alternative Name:	RDH10 (RDH10 Products)
Background:	Synonyms:SDR16C4 Background:Retinol dehydrogenase with a clear preference for NADP. Converts all-trans-retinol to all-trans-retinal. Has no detectable activity towards 11-cis-retinol, 9-cis-retinol and 13-cis-retinol.

Target Details

Molecular Weight:	39 kDa
Gene ID:	157506
UniProt:	Q8IZV5

Application Details

Application Notes:	WB: 1:500-1:2000, IP: 1:200-1:1000, IHC: 1:20-1:200
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	PBS with 0.02 % sodium azide and 50 % glycerol pH 7.3,
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C for 12 months (Avoid repeated freeze / thaw cycles.)
Expiry Date:	12 months

Publications

Product cited in:	Tworak, Kolesnikov, Hong, Choi, Luu, Palczewska, Dong, Lewandowski, Brooks, Campello, Swaroop, Kiser, Kefalov, Palczewski: "Rapid RGR-dependent visual pigment recycling is mediated by the RPE and specialized Müller glia." in: Cell reports , Vol. 42, Issue 8, pp. 112982, (2023) (PubMed).
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Successfully validated (Immunohistochemistry (IHC))

by [Palczewski Lab, Center For Translational Vision Research, UC Irvine](#)

Report Number: 104469

Date: Mar 23 2023

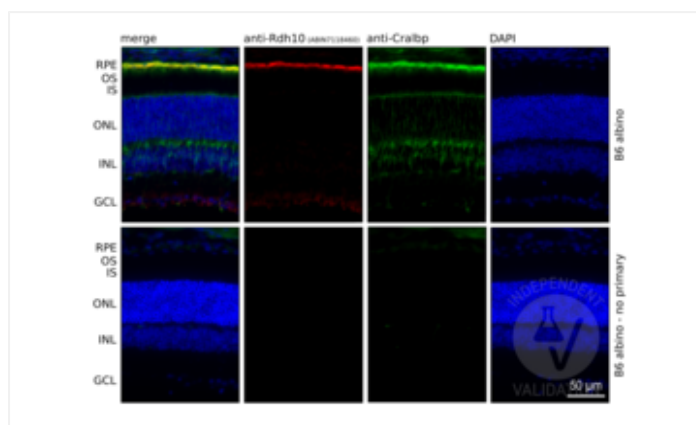
Target:	RDH10
Lot Number:	20221223E
Method validated:	Immunohistochemistry (IHC)
Positive Control:	Retina cryosection from B6 Albino (B6(Cg)-Tyr ^c -2J/J) animal
Negative Control:	Retina cryosection from B6 Albino (B6(Cg)-Tyr ^c -2J/J) animal No primary antibody
Notes:	Passed. Presence of specific signal in the RPE cell layer was considered as indication of specific immunoreactivity using the anti-RDH10 antibody ABIN7118460.
Primary Antibody:	ABIN7118460
Secondary Antibody:	donkey anti-rabbit AF647-conjugated antibody (Abcam, 150075)
Protocol:	<ul style="list-style-type: none"> Collect eyes from mice and fix with paraformaldehyde 4% (Electron Microscopy Sciences, 15710) in 1x PBS for 30 min at RT. Cryoprotection with sucrose series: <ul style="list-style-type: none"> Wash in 10% sucrose in 1x PBS. Immerse in 10% sucrose in 1x PBS for 30 min at RT. Wash in 20% sucrose in 1x PBS. Immerse in 20% sucrose in 1x PBS for 30 min RT. Wash in 30% sucrose in 1x PBS. 30% sucrose ON at 4°C. Embed eyes in OCT compound (Tissue-Tek O.C.T. Compound, 4583). Cut retinal sections at a thickness of 12 µm on a cryostat. Air dry sections for 15 min at RT, store at -80°C until use. Bring sections to RT and rehydrate in 1x PBS for 1 h. Incubate sections in blocking buffer (1x PBS, 3% BSA (Sigma-Aldrich, A7030), 3% Donkey serum (Sigma-Aldrich, S30-100ML), 0.1% Triton X-100 (Sigma-Aldrich, X100-500ML)) for 1 h at RT. Incubate sections with primary rabbit anti-RDH10 antibody (antibodies-online, ABIN7118460, lot 20221223E) diluted 1:50 in blocking buffer ON at RT. Include a no primary antibody negative controls. Additionally, counterstaining with primary mouse anti-CRALBP antibody (Thermo Fisher Scientific, MA1-813).

- Rinse sections 3 times with 1x PBS, 0.1% Triton X100. Keep negative controls in a separate container.
- Incubate sections with secondary AF647-conjugated donkey anti-rabbit antibody (Abcam, Ab150075) or AF488-conjugated donkey anti-mouse antibody (Thermo Fisher Scientific, A32766) diluted 1:500 in blocking buffer for 1 h at RT.
- Rinse sections once with 1x PBS, 0.1% Triton X-100 for 5 min at RT.
- Incubate sections in 1x DAPI (Thermo Fisher Scientific, 62248) in 1x PBS, 0.1% Triton X-100 for 15 min at RT.
- Rinse sections 3x with 1x PBS, 0.1% Triton X-100 for 5 min at RT.
- Mount sections in VECTASHIELD® HardSet™ Antifade Mounting Medium (Vector Laboratories, H-1400) mounting medium.
- Acquire images with a fluorescence microscope and appropriate filter settings. For the validation purposes Keyence BZ-X800E fluorescence microscope was used with following filters: BZ-X DAPI for DAPI, BZ-X GFP for AF488, BZ-X Cy5 for AF647. Images were taken at 10x and 40x magnification.

Experimental Notes:

- Experiment involved validation of the specificity of 4 antibodies against different Rdh proteins: Rdh5 (ABIN7254060), Rdh10 (ABIN7118460), Rdh11 (ABIN966957), and Rdh12 (ABIN7167836). All 4 proteins are important for eye function and highly expressed in neural retina and/or RPE. Validation is based on comparison of each staining with known pattern of expression in the mouse retina. For review highlighting each Rdh localization see [PMID20801113](https://pubmed.ncbi.nlm.nih.gov/20801113/).
- To aid orientation in the cell layers anti-Cralbp counterstain was included in the staining (Thermo MA1-813). Cralbp (Rlbp1) is highly expressed in RPE and Müller glia cells in mouse retina.

Image for Validation report #104469



Validation image no. 1 for anti-Retinol Dehydrogenase 10 (All-Trans) (RDH10) antibody (ABIN7118460)

Retinal sections from the wild-type (B6 albino) mice immunostained with anti-Rdh10 antibody ABIN7118460. DAPI staining shows localization of the inner (INL) and outer (ONL) nuclear layer of the mouse retina. Cralbp (Rlbp1) co-staining was used to visualize RPE and Müller glia cells in the retina. Presence of specific signal in the RPE cell layer confirms specific immunoreactivity.