abcam

ab272171

Anti-CRALBP antibody [EPR23448-119] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR23448-119
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	-
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Species	Rat
Dilution info	-
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information RLBP1

Function Soluble retinoid carrier essential the proper function of both rod and cone photoreceptors. Participates in the regeneration of active 11-cis-retinol and 11-cis-retinaldehyde, from the inactive 11-trans products of the rhodopsin photocycle and in the de novo synthesis of these retinoids from 11-trans metabolic precursors. The cycling of retinoids between photoreceptor and adjacent pigment epithelium cells is known as the 'visual cycle'.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab272171 is the carrier-free version of ab243664.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	'CRALBP' also known as cellular retinaldehyde-binding protein is a protein involved in the visual cycle. It weighs approximately 36 kDa. Expressed mainly in the retina CRALBP is found in retinal pigment epithelial (RPE) cells and Muller glial cells. It binds to retinoids which are critical for proper vision functioning. CRALBP also

	goes by the synonyms such as 'BSA b 2' which is used in specific contexts related to its role in retinal metabolism.
Biological function summary	The protein aids in the effective conversion of all-trans-retinal to 11-cis-retinal an important step in the visual cycle. It acts as a chaperone that stabilizes retinoid intermediates facilitating their transport between various retinal cell types. CRALBP forms part of a complex with retinoid isomerohydrolase and 11-cis-retinol dehydrogenase enhancing its binding and transport function. This ensures smooth retinoid flux necessary for regenerating the visual pigment rhodopsin.
Pathways	CRALBP is integral to two main pathways; the retinoid cycle in cones and the rhodopsin regeneration pathway in rods. In these pathways it interacts with proteins such as RPE65 and 11-cis-retinol dehydrogenase ensuring efficient retinoid transfer and isomerization. This important involvement supports the regeneration of visual pigments necessary for photoreceptor cell function under various lighting conditions.
Associated diseases and disorders	CRALBP associates with retina-related conditions notably congenital stationary night blindness (CSNB) and retinitis pigmentosa (RP). Mutations affecting CRALBP can alter retinoid transport and contribute to these disorders. Additionally CRALBP dysfunction links to other proteins like RPE65 and RDH5 which can also play roles in the pathogenesis of these visual impairments. Understanding these relationships helps in developing targeted treatments for retinoid-related visual disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

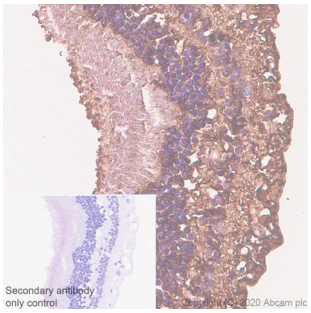
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:

8 product images



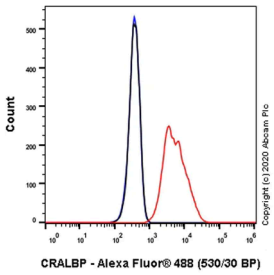
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRALBP antibody [EPR23448-119] - BSA and Azide free (ab272171)

CRALBP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CRALBP antibody

Immunohistochemical analysis of paraffin-embedded Human retina tissue labeling CRALBP with ab243664 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on human retina. The section was incubated with ab243664 for 10 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

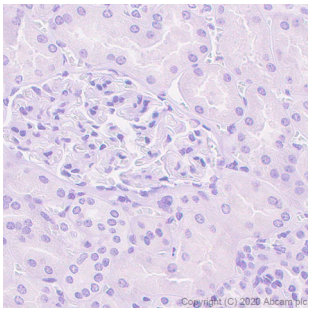
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab243664).



Flow Cytometry (Intracellular) - Anti-CRALBP antibody [EPR23448-119] - BSA and Azide free (ab272171)

CRALBP Flow Cytometry (Intracellular) staining using rabbit Anti-CRALBP antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized SK-MEL-28 (Human malignant melanoma) cells labelling CRALBP with ab243664 at 1/700 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor®488, ab150077) at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab243664).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRALBP antibody [EPR23448-119] - BSA and Azide free (ab272171)

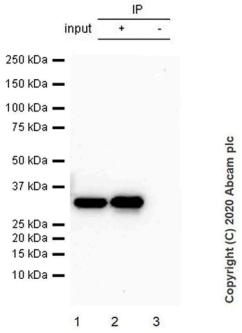
CRALBP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CRALBP antibody

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling CRALBP with ab243664 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Negative control: No staining on human kidney. The section was incubated with ab243664 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab243664).



Immunoprecipitation - Anti-CRALBP antibody [EPR23448-119] - BSA and Azide free (ab272171)

CRALBP was immunoprecipitated from 0.35 mg SK-MEL-28 (human malignant melanoma), whole cell lysate with ab243664 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab243664 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: SK-MEL-28 (human malignant melanoma), whole cell lysate 10 ug

Lane 2: ab243664 IP in SK-MEL-28 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab243664 in SK-MEL-28 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

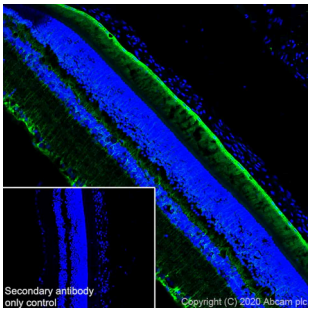
Exposure time: 100 seconds

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab243664).

All lanes:
Immunoprecipitation - Anti-CRALBP antibody [EPR23448-119] (ab243664)

Predicted band size: 36 kDa

Observed band size: 36 kDa

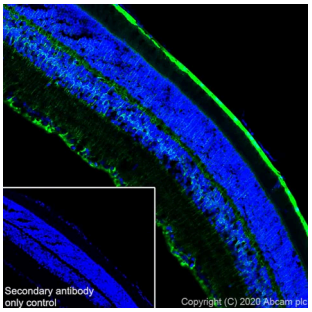


Immunohistochemistry (Frozen sections) - Anti-CRALBP antibody [EPR23448-119] - BSA and Azide free (ab272171)

CRALBP Immunohistochemistry (Frozen sections) staining using rabbit Anti-CRALBP antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat retina tissue labeling CRALBP with ab243664 at 250 dilution followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1000 dilution (Green). Positive staining on rat retina especially on retinal pigment epithelial cell (RPE) and Muller cells. is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1/000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab243664).



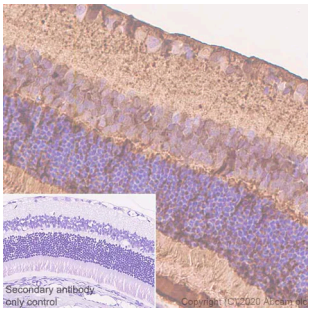
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CRALBP Immunohistochemistry (Frozen sections) staining using rabbit Anti-CRALBP antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse retina tissue labeling CRALBP with ab243664 at 250 dilution followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at 1000 dilution (Green). Positive staining on mouse retina especially on retinal pigment epithelial cell (RPE) and Muller cells. is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit secondaryat 1000 dilution.

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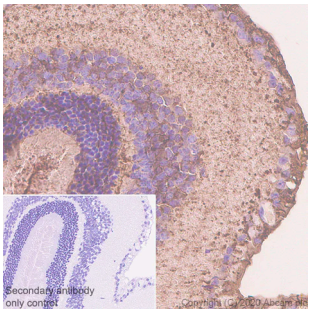
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CRALBP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CRALBP antibody

Immunohistochemical analysis of paraffin-embedded Rat retina tissue labeling CRALBP with ab243664 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on rat retina. The section was incubated with ab243664 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.
Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRALBP antibody [EPR23448-119] - BSA and Azide free (ab272171)

CRALBP Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CRALBP antibody

Immunohistochemical analysis of paraffin-embedded Mouse retina tissue labeling CRALBP with ab243664 at 1/2000 dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on mouse retina. The section was incubated with ab243664 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.
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This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab243664).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.