abcam

ab243664

Anti-CRALBP antibody [EPR23448-119]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR23448-119
Purification technique	Affinity purification Protein A
Concentration	0.71 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/250
Notes	Heat mediated antigen retrieval using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20).

Species	Rat
Dilution info	1/250
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	1/700
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	

	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

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	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

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.

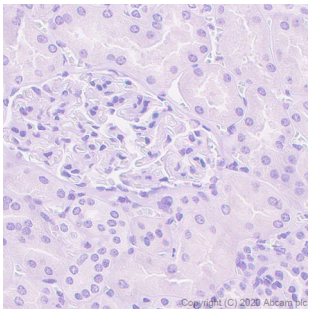
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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:
Terms & Conditions.

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11 product images



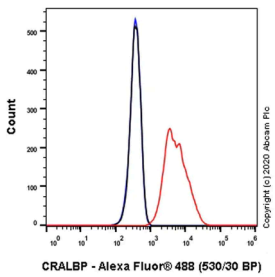
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRALBP antibody [EPR23448-119] (ab243664)

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

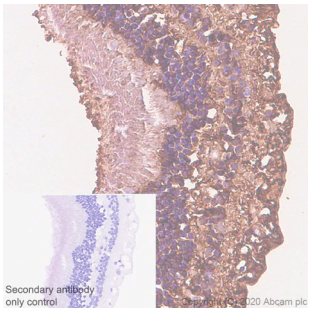
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Flow Cytometry (Intracellular) - Anti-CRALBP antibody [EPR23448-119] (ab243664)

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.

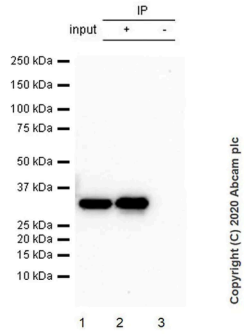


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRALBP antibody [EPR23448-119] (ab243664)

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



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

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

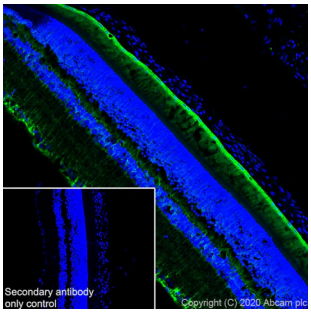
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 100 seconds

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

Predicted band size: 36 kDa

Observed band size: 36 kDa

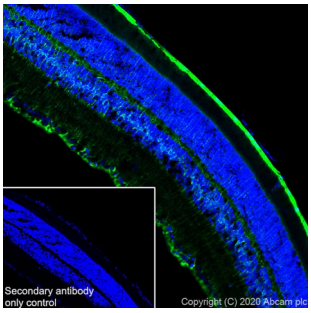


Immunohistochemistry (Frozen sections) - Anti-CRALBP antibody [EPR23448-119] (ab243664)

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

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

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

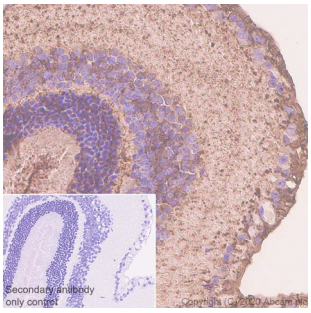


Immunohistochemistry (Frozen sections) - Anti-CRALBP antibody [EPR23448-119] (ab243664)

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

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

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

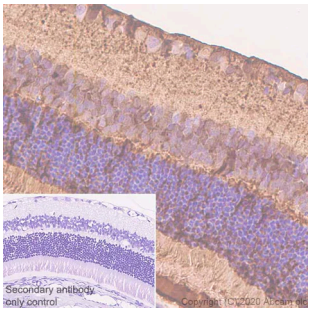


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRALBP antibody [EPR23448-119] (ab243664)

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.
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

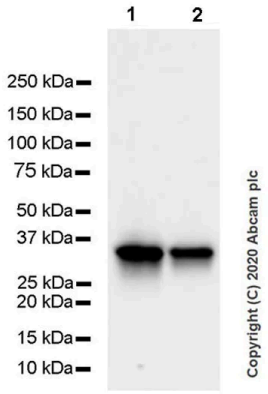


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRALBP antibody [EPR23448-119] (ab243664)

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.



Western blot - Anti-CRALBP antibody [EPR23448-119] (ab243664)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The molecular weight observed is consistent with what has been described in the literature (PMID: 29063836).

Exposure time: 15 seconds.

All lanes:
Western blot - Anti-CRALBP antibody [EPR23448-119] (ab243664) at 1/1000 dilution

Lane 1:
SK-MEL-2 (human skin malignant melanoma), whole cell lysate at 20 µg

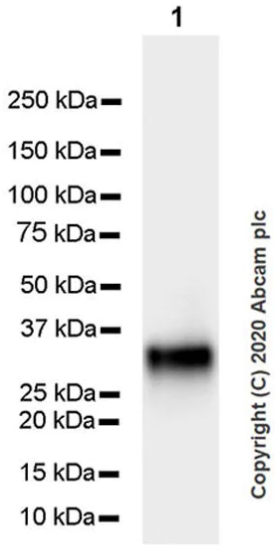
Lane 2:
SK-MEL-28 (human malignant melanoma), whole cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 36 kDa

Observed band size: 36 kDa



Western blot - Anti-CRALBP antibody [EPR23448-119] (ab243664)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The molecular weight observed is consistent with what has been described in the literature (PMID: 29063836).

Exposure time: 3.25 seconds.

All lanes:
Western blot - Anti-CRALBP antibody [EPR23448-119] (ab243664) at 1/1000 dilution

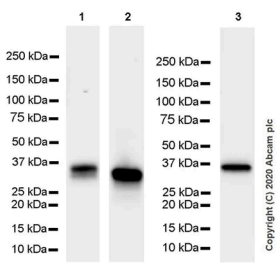
All lanes:
Human eyeball tissue lysate at 20 µg

Secondary

All lanes:
VeriBlot for IP secondary antibody(HRP)(ab131366) at 1/1000 dilution

Predicted band size: 36 kDa

Observed band size: 36 kDa



Western blot - Anti-CRALBP antibody [EPR23448-119] (ab243664)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The molecular weight observed is consistent with what has been described in the literature (PMID: 26199951)

Exposure time: 15 seconds.

All lanes:

Western blot - Anti-CRALBP antibody [EPR23448-119] (ab243664) at 1/1000 dilution

Lane 1:
Mouse eyeball tissue lysate at 20 µg

Lane 2:
Rat eyeball tissue lysate at 20 µg

Lane 3:
Mouse P20 retina tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 36 kDa

Observed band size: 36 kDa

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