

Product datasheet

Anti-CRX antibody [EPR9582] ab140603

Recombinant RabMAb

★★★★★ [2 Abreviews](#) [3 References](#) [4 Images](#)

Overview

Product name	Anti-CRX antibody [EPR9582]
Description	Rabbit monoclonal [EPR9582] to CRX
Host species	Rabbit
Tested applications	Suitable for: mIHC, WB, IHC-P Unsuitable for: Flow Cyt, ICC/IF or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Y79 cell lysate; IHC-P: Human retina tissue. mIHC: Human retina tissue.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant</p>
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR9582
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab140603 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
mlHC		Use at an assay dependent concentration.
WB		1/1000 - 1/10000. Detects a band of approximately 37 kDa (predicted molecular weight: 32 kDa).
IHC-P		1/250 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt, ICC/IF or IP.

Target

Function Binds and transactivates the sequence 5'-TAATC[CA]-3' which is found upstream of several photoreceptor-specific genes, including the opsin genes. Acts synergistically with other transcription factors, e.g. NRL and RX, to regulate photoreceptor cell-specific gene transcription. Essential for the maintenance of mammalian photoreceptors.

Tissue specificity Retina.

Involvement in disease Defects in CRX are the cause of Leber congenital amaurosis type 7 (LCA7) [MIM:613829]. LCA designates a clinically and genetically heterogeneous group of childhood retinal degenerations, generally inherited in an autosomal recessive manner. Affected infants have little or no retinal photoreceptor function as tested by electroretinography. LCA represents the most common genetic cause of congenital visual impairment in infants and children.

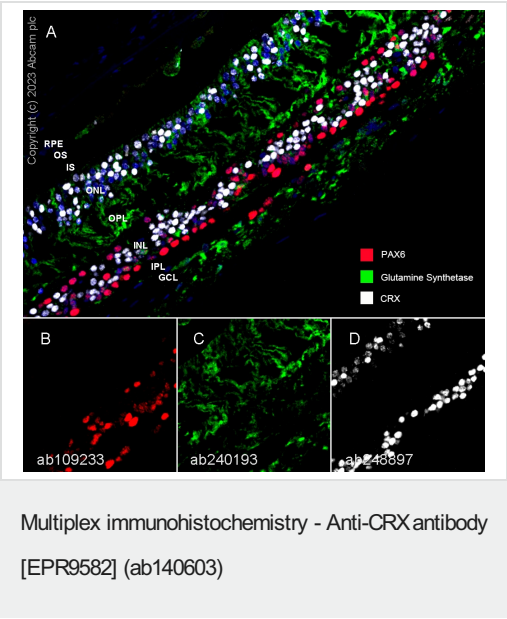
Defects in CRX are the cause of cone-rod dystrophy type 2 (CORD2) [MIM:120970]; also known as cone-rod retinal dystrophy 2 (CRD2). CORDs are inherited retinal dystrophies belonging to the group of pigmentary retinopathies. CORDs are characterized by retinal pigment deposits visible on fundus examination, predominantly in the macular region, and initial loss of cone photoreceptors followed by rod degeneration. This leads to decreased visual acuity and sensitivity in the central visual field, followed by loss of peripheral vision. Severe loss of vision occurs earlier than in retinitis pigmentosa.

Defects in CRX are a cause of retinitis pigmentosa (RP) [MIM:268000]. RP leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well.

Sequence similarities Belongs to the paired homeobox family.
Contains 1 homeobox DNA-binding domain.

Cellular localization Nucleus.

Images



Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded Human retina tissue labeling PAX6, Glutamine Synthetase and CRX with **ab109233** at 1/10000 dilution, **ab240193** at 1/20000 dilution and **ab248897** at 1/1000 dilution followed by a ready to use Opal Polymer HRP Ms + Rb secondary antibody. Nuclear counter stain used was DAPI.

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

Panel A: merged staining of anti-CRX (gray; Opal™690), anti-Glutamine Synthetase (green; Opal™520) and anti-PAX6 (red; Opal™570) on human retina.

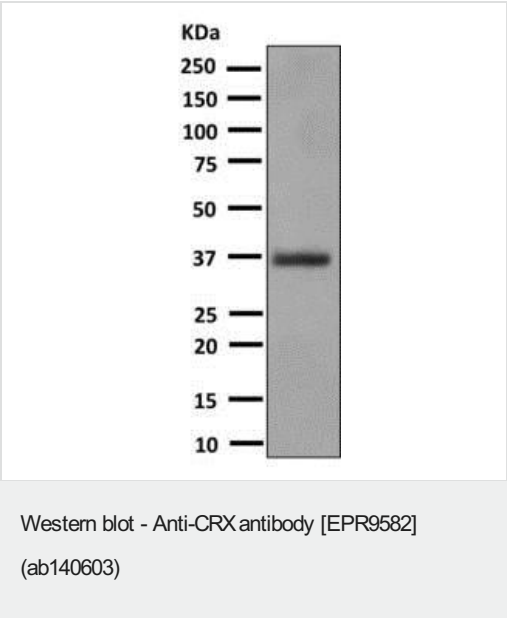
Panel B: anti-PAX6 stained on retinal progenitor cells.

Panel C: anti-Glutamine Synthetase stained on Müller glia.

Panel D: anti-CRX stained on subset cells of outer nuclear layer and inner nuclear layer.

The section was incubated in three rounds of staining: in the order of **ab248897**, **ab240193**, and **ab109233** for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.



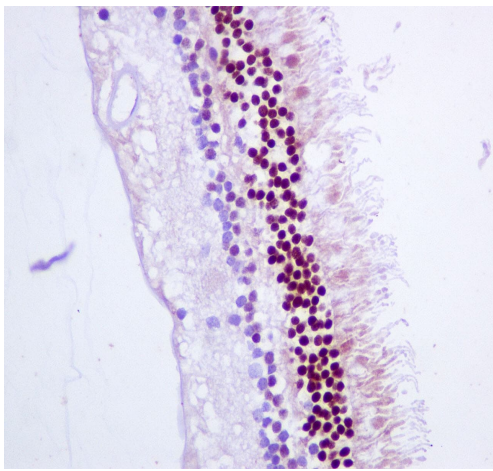
Anti-CRX antibody [EPR9582] (ab140603) at 1/1000 dilution + Y79 cell lysate at 10 µg

Secondary

HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 32 kDa

Observed band size: 37 kDa

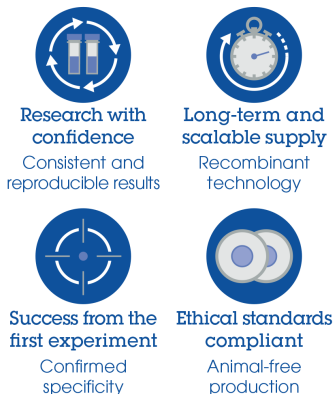


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CRX antibody [EPR9582] (ab140603)

Immunohistochemical analysis of paraffin-embedded human retina tissue labeling CRX with ab140603 at 1/250 dilution followed by Goat Anti-Rabbit IgG H&L (HRP). Counter stained with hematoxylin.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Why choose a recombinant antibody?



Anti-CRX antibody [EPR9582] (ab140603)

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