

# CRALBP (H-100): sc-28193

## BACKGROUND

11-*cis*-retinal, the universal chromophore of the vertebrate retina, is coupled to opsins in both rod and cone photoreceptor cells and is photoisomerized to all-*trans*-retinal by light. This conversion is inhibited when 11-*cis*-retinal is in a complex with cellular retinaldehyde-binding protein (CRALBP). CRALBP may play a role in the vertebrate visual process as a substrate-routing protein, influencing the enzymatic partitioning of 11-*cis*-retinal at a key branch point in the visual cycle. Human CRALBP maps to chromosome 15q26.1 and encodes a 316 amino acid protein. CRALBP is not expressed in photoreceptors and is abundant in the retinal pigment epithelium (RPE) and Muller cells of the neuro-retina, where it carries 11-*cis*-retinol and 11-*cis*-retinaldehyde. Mutations in the human CRALBP gene cause retinal pathology and delayed dark adaptation. CRALBP knockout mice have a delayed response in rhodopsin regeneration, 11-*cis*-retinal production and dark adaptation after illumination.

## REFERENCES

- Crabb, J.W., et al. 1988. Cloning of the cDNAs encoding the cellular retinaldehyde-binding protein from bovine and human retina and comparison of the protein structures. *J. Biol. Chem.* 263: 18688-18692.
- Sparkes, R.S., et al. 1992. Assignment of the gene (RLBP1) for cellular retinaldehyde-binding protein (CRALBP) to human chromosome 15q26 and mouse chromosome 7. *Genomics* 12: 58-62.

## CHROMOSOMAL LOCATION

Genetic locus: RLBP1 (human) mapping to 15q26.1; Rlbp1 (mouse) mapping to 7 D3.

## SOURCE

CRALBP (H-100) is a rabbit polyclonal antibody raised against amino acids 1-100 mapping at the N-terminus of CRALBP of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CRALBP (H-100) is recommended for detection of CRALBP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). CRALBP (H-100) is also recommended for detection of CRALBP in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CRALBP siRNA (h): sc-40428, CRALBP siRNA (m): sc-40429, CRALBP shRNA Plasmid (h): sc-40428-SH, CRALBP shRNA Plasmid (m): sc-40429-SH, CRALBP shRNA (h) Lentiviral Particles: sc-40428-V and CRALBP shRNA (m) Lentiviral Particles: sc-40429-V.

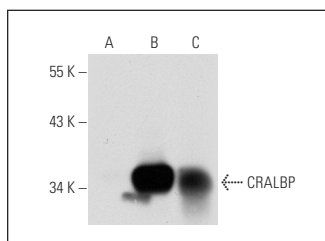
Molecular Weight of CRALBP: 36 kDa.

Positive Controls: CRALBP (m): 293T Lysate: sc-126665 or rat eye extract: sc-364805.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



CRALBP (H-100): sc-28193. Western blot analysis of CRALBP expression in non-transfected: sc-117752 (A) and mouse CRALBP transfected: sc-126665 (B) 293T whole cell lysates and rat eye tissue extract (C).

## SELECT PRODUCT CITATIONS

- Pannicke, T., et al. 2014. Differential effects of P2Y1 deletion on glial activation and survival of photoreceptors and amacrine cells in the ischemic mouse retina. *Cell Death Dis.* 5: e1353.
- Laird, J.G., et al. 2015. Identification of a VxP targeting signal in the flagellar Na<sup>+</sup>/K<sup>+</sup>-ATPase. *Traffic* 16: 1239-1253.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **CRALBP (G-9): sc-376082** or **CRALBP (B2): sc-59487**, our highly recommended monoclonal alternatives to CRALBP (H-100).