

CRALBP (K-20): sc-18757

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*-retinol 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 neuroretina, 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

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- Intres, R., et al. 1994. Molecular cloning and structural analysis of the human gene encoding cellular retinaldehyde-binding protein. *J. Biol. Chem.* 269: 25411-25418.
- McBee, J.K., et al. 2001. Isomerization of 11-*cis*-retinoids to all-*trans*-retinoids *in vitro* and *in vivo*. *J. Biol. Chem.* 276: 48483-48493.
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CHROMOSOMAL LOCATION

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

SOURCE

CRALBP (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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.

Blocking peptide available for competition studies, sc-18757 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CRALBP (K-20) 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), 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 (K-20) is also recommended for detection of CRALBP in additional species, including canine.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **CRALBP (G-9): sc-376082** or **CRALBP (B2): sc-59487**, our highly recommended monoclonal alternatives to CRALBP (K-20).