Anti-CRALBP Antibody [JE35-09]

HA721330

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse, Rat
Applications:	WB, IF-Cell, FC
Molecular Wt:	Predicted band size: 36.5 kDa
Clone number:	JE35-09

Description: Retinaldehyde-binding protein 1 (RLBP1) also known as cellular retinaldehyde-binding protein (CRALBP) is a 36-kD water-soluble protein that in humans is encoded by the RLBP1 gene. Cellular retinol binding protein (CRBP) was first discovered in 1973 from lung tissues by Bashor et al. There have been three cellular retinol binding protein categories discovered; Cellular retinol-binding protein, cellular retinoic acid-binding protein and cellular retinaldehyde-binding protein(CRALBP). CRALBP was first discovered in 1977, after it was purified from retina and retinal pigment epithelial cells. The cellular retinaldehyde-binding protein transports 11-cis-retinal (also known as 11-cis-retinaldehyde) as its physiological ligands. It plays a critical role as an 11-cis-retinal acceptor which facilitates the enzymatic isomerization of all 11-trans-retinal to 11-cis-retinal, in the isomerization of the rod and cones of the visual cycle.

Immunogen: Synthetic peptide within Human CRALBP aa 26-75 / 317.

Positive control: Rat eyeball tissue lysate, mouse eyeball tissue lysate, B16F1.

Subcellular location: Cytoplasm.

Database links: SwissProt: Q9Z275 Mouse
Entrez Gene: 293049 Rat

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:50
FC	1ug/mL

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

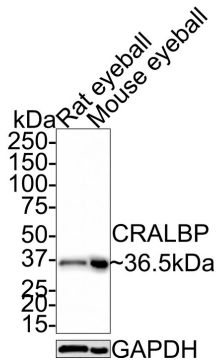

Fig1: Western blot analysis of CRALBP on different lysates with Rabbit anti-CRALBP antibody (HA721330) at 1/500 dilution.

Lane 1: Rat eyeball tissue lysate
Lane 2: Mouse eyeball tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 36.5 kDa
Observed band size: 36.5 kDa

Exposure time: 5 minutes;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721330) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

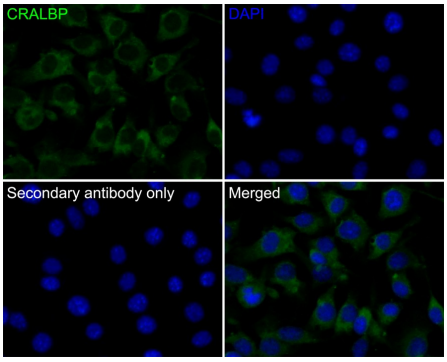

Fig2: Immunocytochemistry analysis of B16F1 cells labeling CRALBP with Rabbit anti-CRALBP antibody (HA721330) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 ℃, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-CRALBP antibody (HA721330) at 1/50 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

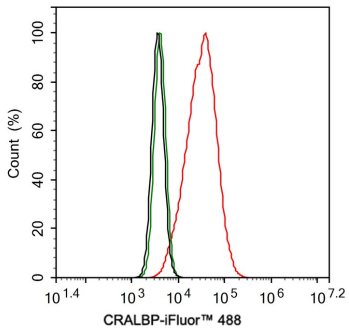

Fig3: Flow cytometric analysis of B16F1 cells labeling CRALBP.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA721330, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Bocquet B et al. Retinitis Punctata Albescens and RLBP1-Allied Phenotypes: Phenotype-Genotype Correlation and Natural History in the Aim of Gene Therapy. Ophthalmol Sci. 2021 Aug
2. Lima de Carvalho JR Jr et al. Effects of deficiency in the RLBP1-encoded visual cycle protein CRALBP on visual dysfunction in humans and mice. J Biol Chem. 2020 May