

CRBP I (FL-135): sc-30106

BACKGROUND

The cellular retinol-binding proteins (CRBP I and II) belong to a superfamily of small cytoplasmic proteins which interact with hydrophobic ligands. Vitamin A, a molecule essential for cell growth and differentiation, embryonic development and vision, is transported into the cell by the CRBPs in its alcoholic form, called retinol. Both CRBP I and II are composed of 10 antiparallel β -strands, which form a β -barrel that contains the retinol molecule, and two α -helices, which cover the open ends of the barrel. CRBP I mediates the cellular uptake of retinol, solubilizes and detoxifies it for further transport within the cytoplasm, and presents it to the appropriate enzymes to biosynthesize retinoic acid, an active form of retinol or retinyl esters, which are stored. CRBP I is expressed in human ovary, adrenal and pituitary glands and testis, and its expression is modulated by TGF β . CRBP II is expressed solely in the small intestine and mediates the absorption of retinoids and carotenoids to biosynthesize retinyl esters. CRBP III and CRBP IV are cytoplasmic proteins that, like CRBP I and CRBP II, form β -barrel structures and participate in the intracellular transport of retinol.

CHROMOSOMAL LOCATION

Genetic locus: RBP1 (human) mapping to 3q23; Rbp1 (mouse) mapping to 9 E3.3.

SOURCE

CRBP I (FL-135) is a rabbit polyclonal antibody raised against amino acids 1-135 representing full length CRBP I of human origin.

PRODUCT

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

APPLICATIONS

CRBP I (FL-135) is recommended for detection of CRBP I of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); partially cross reactive with other CRBP family members.

CRBP I (FL-135) is also recommended for detection of CRBP I in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for CRBP I siRNA (h): sc-43699, CRBP I siRNA (m): sc-60043, CRBP I shRNA Plasmid (h): sc-43699-SH, CRBP I shRNA Plasmid (m): sc-60043-SH, CRBP I shRNA (h) Lentiviral Particles: sc-43699-V and CRBP I shRNA (m) Lentiviral Particles: sc-60043-V.

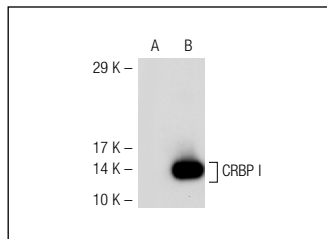
Molecular Weight of CRBP I: 15 kDa.

Positive Controls: CRBP I (m): 293T Lysate: sc-119442, mouse eye extract: sc-364241 or SCC-4 whole cell lysate: sc-364363.

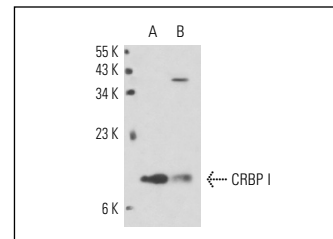
STORAGE

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

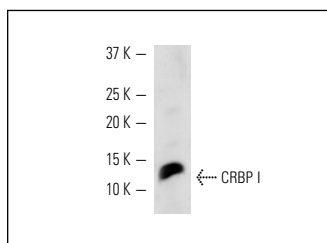
DATA



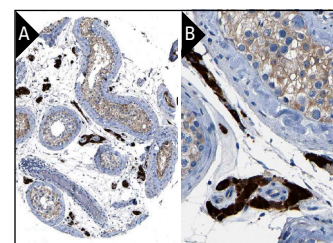
CRBP I (FL-135): sc-30106. Western blot analysis of CRBP I expression in non-transfected: sc-117752 (A) and mouse CRBP I transfected: sc-119442 (B) 293T whole cell lysates.



CRBP I (FL-135): sc-30106. Western blot analysis of CRBP I expression in mouse eye (A) and rat eye (B) tissue extracts.



CRBP I (FL-135): sc-30106. Western blot analysis of CRBP I expression in SCC-4 whole cell lysate.



CRBP I (FL-135): sc-30106. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells and cells in seminiferous ducts at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Catherino, W.H., et al. 2007. Uterine leiomyomas express a molecular pattern that lowers retinoic acid exposure. *Fertil. Steril.* 87: 1388-1398.
- Mezaki, Y., et al. 2007. Rat hepatic stellate cells acquire retinoid responsiveness after activation *in vitro* by post-transcriptional regulation of retinoic acid receptor α gene expression. *Arch. Biochem. Biophys.* 465: 370-379.
- Ma, J.J., et al. 2012. Retinoic acid synthesis and metabolism are concurrent in the mouse uterus during peri-implantation. *Cell Tissue Res.* 350: 525-537.

RESEARCH USE

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

MONOS
Satisfaction
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Try **CRBP I (B-8): sc-271208** or **CRBP I (F3): sc-53989**, our highly recommended monoclonal alternatives to CRBP I (FL-135).