

CRABP-I/II (F-9): sc-166897

BACKGROUND

The cellular retinoic acid-binding protein (CRABP)-I and a related isoform, CRABP-II, bind retinoic acid (RA), an important regulator of cell growth and differentiation in fetal and adult tissues. These CRABP proteins mediate the downstream effects of RA in distinct ways. CRABP-I negatively regulates the activity of RA by enhancing the production of RA-metabolizing enzymes and increasing the rate at which RA is degraded. CRABP-II enhances the effects of RA by directly interacting with RA receptors (RAR) and, in turn, promoting the formation of RAR-RA complexes and stimulating RA-mediated gene transcription. Both CRABP-I and CRABP-II are expressed in the embryo, and CRABP-I is ubiquitously expressed in various adult tissues. The expression of CRABP-II is elevated in cells that synthesize relatively large amounts of RA, and it is also predominantly expressed in skin, uterus, ovary and in the choroid plexus.

CHROMOSOMAL LOCATION

Genetic locus: CRABP1 (human) mapping to 15q25.1, CRABP2 (human) mapping to 1q23.1; Crabp1 (mouse) mapping to 9 A5.3, Crabp2 (mouse) mapping to 3 F1.

SOURCE

CRABP-I/II (F-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 26-130 of CRABP-I of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CRABP-I/II (F-9) is available conjugated to agarose (sc-166897 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166897 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166897 PE), fluorescein (sc-166897 FITC), Alexa Fluor® 488 (sc-166897 AF488), Alexa Fluor® 546 (sc-166897 AF546), Alexa Fluor® 594 (sc-166897 AF594) or Alexa Fluor® 647 (sc-166897 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166897 AF680) or Alexa Fluor® 790 (sc-166897 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

RESEARCH USE

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

APPLICATIONS

CRABP-I/II (F-9) is recommended for detection of CRABP-I and CRABP-II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

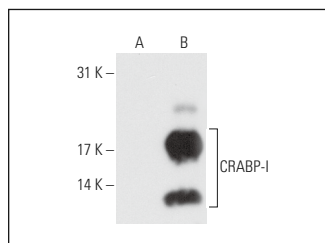
Molecular Weight of CRABP-I/II: 15 kDa.

Positive Controls: CRABP-I (h): 293T Lysate: sc-159411.

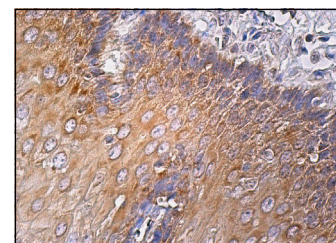
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CRABP-I/II (F-9): sc-166897. Western blot analysis of CRABP-I expression in non-transfected: sc-117752 (A) and human CRABP-I transfected: sc-159411 (B) 293T whole cell lysates.



CRABP-I/II (F-9): sc-166897. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

- Di Giorgio, E., et al. 2020. Mef2d sustains activation of effector FOXP3⁺ tregs during transplant survival and anticancer immunity. *J. Clin. Invest.* 130: 6242-6260.
- Giorgio, E.D., et al. 2021. A regulative epigenetic circuit supervised by HDAC7 represses IGFBP6 and IGFBP7 expression to sustain mammary stemness. *Epigenomics* 13: 683-698.
- Sun, N., et al. 2021. DCX and CRABP2 are candidate genes for differential diagnosis between pre-chemotherapy embryonic and alveolar rhabdomyosarcoma in pediatric patients. *Pediatr. Investig.* 5: 106-111.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.