SANTA CRUZ BIOTECHNOLOGY, INC.

CRABP-I/II (H-105): sc-30105

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.

REFERENCES

1. Wei, L.N., et al. 1990. Molecular cloning and transcriptional mapping of the mouse cellular retinoic acid-binding protein gene. DNA Cell Biol. 9: 471-478.
2. Giguere, V., et al. 1990. Molecular cloning of cDNA encoding a second cellular retinoic acid-binding protein. Proc. Natl. Acad. Sci. USA 87: 6233-6237.
3. Boylan, J.F. and Gudas, L.J. 1992. The level of CRABP-I expression influences the amounts and types of all- trans-retinoic acid metabolites in F9 teratocarcinoma stem cells. J. Biol. Chem. 267: 21486-21491.
4. Gorry, P., et al. 1994. The cellular retinoic acid binding protein I is dispensable. Proc. Natl. Acad. Sci. USA 91: 9032-9036.
5. Dong, D., et al. 1999. Distinct roles for cellular retinoic acid-binding proteins I and II in regulating signaling by retinoic acid. J. Biol. Chem. 274: 23695-23698.

CHROMOSOMAL LOCATION

Genetic locus: CRABP1 (human) mapping to 15q24, CRABP2 (human) mapping to 1q21.3; Crabp1 (mouse) mapping to 9 A5.3, Crabp2 (mouse) mapping to 3 F1.

SOURCE

CRABP-I/II (H-105) is a rabbit polyclonal antibody raised against amino acids 26-130 of CRABP-I 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.

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.

APPLICATIONS

CRABP-I/II (H-105) is recommended for detection of CRABP-I and II 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).

CRABP-I/II (H-105) is also recommended for detection of CRABP-I and II in additional species, including equine, bovine, porcine and avian.

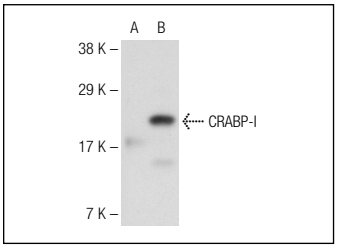
Molecular Weight of CRABP-I/II: 15 kDa.

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

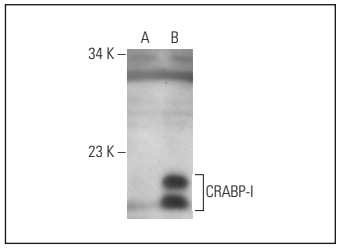
RECOMMENDED SECONDARY REAGENTS

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



CRABP-I/II (H-105): sc-30105. 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 (H-105): sc-30105. Western blot analysis of CRABP-I expression in non-transfected: sc-117752 (**A**) and human CRABP-I transfected: sc-159486 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Catherino, W.H., et al. 2007. Uterine leiomyomas express a molecular pattern that lowers retinoic acid exposure. Fertil. Steril. 87: 1388-1398.