SANTA CRUZ BIOTECHNOLOGY, INC.

EAPP (C-9): sc-365756

BACKGROUND

E2F transcription factors play a major role in apoptosis and cell proliferation and are found to be frequently deregulated in cancers. Through interactions with cell cycle regulators such as cyclins, cyclin-dependent kinases and retinoblastoma protein (Rb), E2F family members also integrate cell cycle progression. EAPP (E2F-associated phosphoprotein) is a 285 amino acid highly phosphorylated nuclear protein that fine-tunes E2F activities by interacting with E2F-1, E2F-2 and E2F-3, but not E2F-4. By binding to the N-terminal domain of these E2F family members, EAPP interferes with the binding of cyclin A, Sp1 transcription factors, EBP1 and EBP2, therefore influencing E2F activity. Interestingly, EAPP is expressed during the cell cycle, but disappears during mitosis, suggesting that this step is necessary to complete the cell cycle. EAPP is ubiquitously expressed, with highest levels found in placenta, pancreas, skeletal muscle and heart.

REFERENCES

1. Ivey-Hoyle, M., et al. 1993. Cloning and characterization of E2F-2, a novel protein with the biochemical properties of transcription factor E2F. Mol. Cell. Biol. 13: 7802-7812.
2. Karlseder, J., et al. 1996. Interaction of Sp1 with the growth- and cell cycle-regulated transcription factor E2F. Mol. Cell. Biol. 16: 1659-1667.
3. Oswald, F., et al. 1996. The E2F transcription factor activates a replication-dependent human H2A gene in early S phase of the cell cycle. Mol. Cell. Biol. 16: 1889-1895.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609486. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Araki, K., et al. 2003. Distinct recruitment of E2F family members to specific E2F-binding sites mediates activation and repression of the E2F1 promoter. Oncogene 22: 7632-7641.

CHROMOSOMAL LOCATION

Genetic locus: EAPP (human) mapping to 14q13.1; Eapp (mouse) mapping to 12 C1.

SOURCE

EAPP (C-9) is a mouse monoclonal antibody raised against amino acids 1-285 representing full length EAPP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EAPP (C-9) is available conjugated to agarose (sc-365756 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365756 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365756 PE), fluorescein (sc-365756 FITC), Alexa Fluor® 488 (sc-365756 AF488), Alexa Fluor® 546 (sc-365756 AF546), Alexa Fluor® 594 (sc-365756 AF594) or Alexa Fluor® 647 (sc-365756 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365756 AF680) or Alexa Fluor® 790 (sc-365756 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EAPP (C-9) is recommended for detection of EAPP 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for EAPP siRNA (h): sc-92116, EAPP siRNA (m): sc-143265, EAPP shRNA Plasmid (h): sc-92116-SH, EAPP shRNA Plasmid (m): sc-143265-SH, EAPP shRNA (h) Lentiviral Particles: sc-92116-V and EAPP shRNA (m) Lentiviral Particles: sc-143265-V.

Molecular Weight (predicted) of EAPP: 33 kDa.

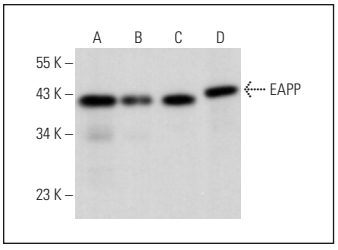
Molecular Weight (observed) of EAPP: 44 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HL-60 whole cell lysate: sc-2209 or MIA PaCa-2 cell lysate: sc-2285.

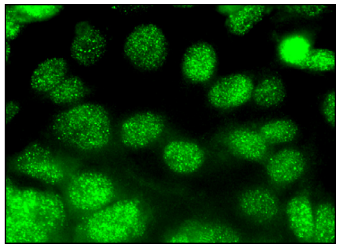
RECOMMENDED SUPPORT REAGENTS

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.

DATA



EAPP (C-9): sc-365756. Western blot analysis of EAPP expression in MIA PaCa-2 (**A**), Hep G2 (**B**), HL-60 (**C**) and NIH/3T3 (**D**) whole cell lysates.



EAPP (C-9): sc-365756. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

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.