SANTA CRUZ BIOTECHNOLOGY, INC.

EPLIN (E-12): sc-49945

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Epithelial protein lost in neoplasm (EPLIN) is a cytoskeleton-associated protein characterized by the presence of a single centrally located lin-11, isl-1 and mec-3 (LIM) domain. It also contains at least two Actin-binding domains, in which the C-terminal domain binds more effectively than the N-terminal domain. By binding Actin monomers and filaments, EPLIN is involved in regulation of the Actin cytoskeleton by increasing the number and size of Actin stress fibers, delaying filament nucleation, reducing formation of branched filaments and bundling of Actin filaments. It also inhibits membrane ruffling and Actin filament depolymerization. EPLIN is strongly expressed in placenta, kidney, pancreas, prostate, ovary, spleen and heart, and to a lesser degree in lung, liver, brain, skeletal muscle, thymus, testis and intestine. It is expressed as two isoforms, EPLIN-α and EPLIN-β. Downregulation of EPLIN-α expression may contribute to the motility of invasive tumor cells.

REFERENCES

1. Chen, S., Maul, R.S., Kim, H.R. and Chang, D.D. 2000. Characterization of the human EPLIN (epithelial protein lost in neoplasm) gene reveals distinct promoters for the two EPLIN isoforms. Gene 248: 269-276.
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3. Maul, R.S., Sachi Gerbin, C. and Chang, D.D. 2001. Characterization of mouse epithelial protein lost in neoplasm (EPLIN) and comparison of mammalian and zebrafish EPLIN. Gene 262: 155-160.
4. Song, Y., Maul, R.S., Gerbin, C.S. and Chang, D.D. 2002. Inhibition of anchorage-independent growth of transformed NIH/3T3 cells by epithelial protein lost in neoplasm (EPLIN) requires localization of EPLIN to Actin cytoskeleton. Mol. Biol. Cell. 13: 1408-1416.
5. Maul, R.S., Song, Y., Amann, K.J., Gerbin, S.C., Pollard, T.D. and Chang, D.D. 2003. EPLIN regulates Actin dynamics by cross-linking and stabilizing filaments. J. Cell Biol. 160: 399-407.
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CHROMOSOMAL LOCATION

Genetic locus: LIMA1 (human) mapping to 12q13; Lima1 (mouse) mapping to 15 F1.

SOURCE

EPLIN (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EPLIN of human origin.

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 or our catalog for detailed protocols and support products.

PRODUCT

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

Blocking peptide available for competition studies, sc-49945 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EPLIN (E-12) is recommended for detection of EPLIN (epithelial protein lost in neoplasm) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for EPLIN siRNA (h): sc-60593 and EPLIN siRNA (m): sc-60594.

Molecular Weight of EPLIN-α: 90 kDa.

Molecular Weight of EPLIN-β: 110 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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