SANTA CRUZ BIOTECHNOLOGY, INC.

EML1 (B-3): sc-390841

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Echinoderm microtubule-associated proteins function to modify the assembly dynamics of microtubules by making microtubules slightly longer yet more dynamic. They are classified as ubiquitous due to their expression in most tissues, however, their expression does not occur in the thymus nor the peripheral blood lymphocytes. In the human form of the protein, there is a WD40 domain, also contained in a number of eukaryotic proteins, that carries out functions including signal transduction using adaptor/regulatory modules, pre-mRNA processing and cytoskeleton assembly. EML1 (echinoderm microtubule-associated protein-like 1 or EMAP-1) may be a candidate gene for Usher syndrome type 1A. Usher syndromes (USHs) are a group of genetic disorders consisting of congenital deafness, retinitis pigmentosa, and vestibular dysfunction of variable onset and severity depending on the genetic type.

REFERENCES

1. Li, Q. and Suprenant, K.A. 1994. Molecular characterization of the 77 kDa echinoderm microtubule-associated protein. Homology to the β-transducin family. J. Biol. Chem. 269: 31777-31784.
2. Eudy, J.D., et al. 1997. Isolation of a novel human homologue of the gene coding for echinoderm microtubule-associated protein (EMAP) from the Usher syndrome type 1a locus at 14q32. Genomics 43: 104-106.
3. Daggett, M.A., et al. 1998. Overexpression of the 77 kD echinoderm microtubule-associated protein (EMAP), a WD-40 repeat protein, in baculovirus-infected Sf9 cells. Cell Motil. Cytoskeleton 41: 57-67.
4. Suprenant, K.A., et al. 2000. Conservation of the WD-repeat, microtubule-binding protein, EMAP, in sea urchins, humans, and the nematode *C. elegans*. Dev. Genes Evol. 210: 2-10.

CHROMOSOMAL LOCATION

Genetic locus: EML1 (human) mapping to 14q32.2; Eml1 (mouse) mapping to 12 F1.

SOURCE

EML1 (B-3) is a mouse monoclonal antibody raised against amino acids 60-120 mapping within an internal region of EML1 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.

EML1 (B-3) is available conjugated to agarose (sc-390841 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390841 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390841 PE), fluorescein (sc-390841 FITC), Alexa Fluor® 488 (sc-390841 AF488), Alexa Fluor® 546 (sc-390841 AF546), Alexa Fluor® 594 (sc-390841 AF594) or Alexa Fluor® 647 (sc-390841 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390841 AF680) or Alexa Fluor® 790 (sc-390841 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EML1 (B-3) is recommended for detection of EML1 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 EML1 siRNA (h): sc-60576, EML1 siRNA (m): sc-144642, EML1 shRNA Plasmid (h): sc-60576-SH, EML1 shRNA Plasmid (m): sc-144642-SH, EML1 shRNA (h) Lentiviral Particles: sc-60576-V and EML1 shRNA (m) Lentiviral Particles: sc-144642-V.

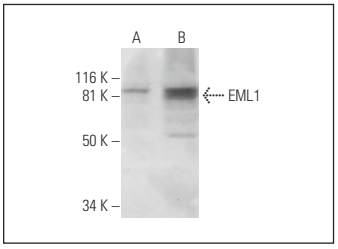
Molecular Weight of EML1: 90 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, rat brain extract: sc-2392 or NCI-H1299 whole cell lysate: sc-364234.

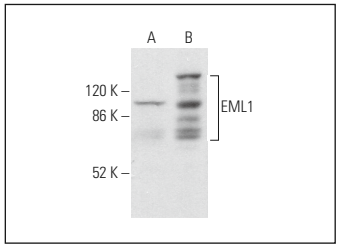
RECOMMENDED SUPPORT REAGENTS

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



EML1 (B-3): sc-390841. Western blot analysis of EML1 expression in Hep G2 (**A**) and NCI-H1299 (**B**) whole cell lysates.



EML1 (B-3): sc-390841. Western blot analysis of EML1 expression in mouse postnatal brain (**A**) and rat brain (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Markus, F., et al. 2021. A novel missense variant in the EML1 gene associated with bilateral ribbon-like subcortical heterotopia leads to ciliary defects. J. Hum. Genet. 66: 1159-1167.

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.