SANTA CRUZ BIOTECHNOLOGY, INC.

EML2 (H-54): sc-135142

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Microtubules are components of the actin cytoskeleton that play crucial roles in cell morphogenesis, cell motility, spindle formation and chromosome movements. Echinoderm microtubule-associated (EML) proteins function to modify the assembly dynamics of microtubules. EML2 (echinoderm microtubule associated protein like 2), also known as ELP70, EMAP2 or EMAPL2, is a cytoplasmic protein that acts to elongate microtubules, while at the same time making them more dynamic. Like other members of the EML family, EML2 contains a hydrophobic ELP (HELP) domain and a large WD repeat domain, both of which allow EML2 to participate in cytoskeleton assembly.

REFERENCES

1. Eudy, J.D., Ma-Edmonds, M., Yao, S.F., Talmadge, C.B., Kelley, P.M., Weston, M.D., Kimberling, W.J. and Sumegi, J. 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.
2. Hamill, D.R., Howell, B., Cassimeris, L. and Suprenant, K.A. 1998. Purification of a WD repeat protein, EMAP, that promotes microtubule dynamics through an inhibition of rescue. J. Biol. Chem. 273: 9285-9291.
3. Lepley, D.M., Palange, J.M. and Suprenant, K.A. 1999. Sequence and expression patterns of a human EMAP-related protein-2 (HuEMAP-2). Gene 237: 343-349.
4. Suprenant, K.A., Tuxhorn, J.A., Daggett, M.A., Ahrens, D.P., Hostetler, A., Palange, J.M., VanWinkle, C.E. and Livingston, B.T. 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.
5. Eichenmüller, B., Ahrens, D.P., Li, Q. and Suprenant, K.A. 2002. Saturable binding of the echinoderm microtubule-associated protein (EMAP) on microtubules, but not filamentous actin or vimentin filaments. Cell Motil. Cytoskeleton 50: 161-172.
6. Zhang, Z., Trautmann, K. and Schluesener, H.J. 2005. Microglia activation in rat spinal cord by systemic injection of TLR3 and TLR7/8 agonists. J. Neuroimmunol. 164: 154-160.

CHROMOSOMAL LOCATION

Genetic locus: EML2 (human) mapping to 19q13.32, EML1 (human) mapping to 14q32.2; Eml2 (mouse) mapping to 7 A3, Eml1 (mouse) mapping to 12 F1.

SOURCE

EML2 (H-54) is a rabbit polyclonal antibody raised against amino acids 317-370 mapping within an internal region of EML2 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.

RESEARCH USE

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

APPLICATIONS

EML2 (H-54) is recommended for detection of EML2 and, to a lesser extent, EML1 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).

EML2 (H-54) is also recommended for detection of EML2 and, to a lesser extent, EML1 in additional species, including equine, canine and porcine.

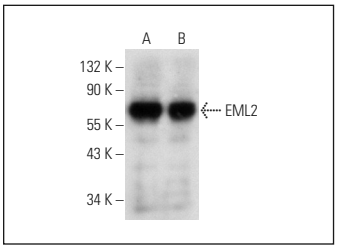
Molecular Weight of EML2: 71 kDa.

Positive Controls: EML2 (m): 293T Lysate: sc-126787, A549 cell lysate: sc-2413 or T-47D cell lysate: sc-2293.

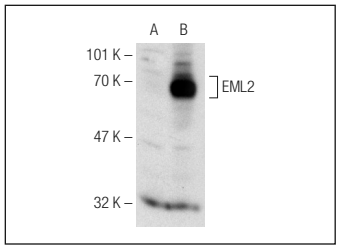
RECOMMENDED SECONDARY REAGENTS

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



EML2 (H-54): sc-135142. Western blot analysis of EML2 expression in T-47D (**A**) and A549 (**B**) whole cell lysates.



EML2 (H-54): sc-135142. Western blot analysis of EML2 expression in non-transfected: sc-117752 (**A**) and mouse EML2 transfected: sc-126787 (**B**) 293T whole cell lysates.

STORAGE

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

MONOS Satisfaction Guaranteed

Try **EML2 (F-3): sc-374627**, our highly recommended monoclonal alternative to EML2 (H-54).