

EML2 (F-3): sc-374627

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., et al. 1997. Isolation of a novel human homologue of the gene coding for echinoderm microtubule-associated protein (EMAP) from the Usher syndrome type 1 α locus at 14q32. *Genomics* 43: 104-106.
2. Hamill, D.R., et al. 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., et al. 1999. Sequence and expression patterns of a human EMAP-related protein-2 (HuEMAP-2). *Gene* 237: 343-349.
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.
5. Eichenmuller, B., et al. 2002. The human EMAP-like protein-70 (ELP70) is a microtubule destabilizer that localizes to the mitotic apparatus. *J. Biol. Chem.* 277: 1301-1309.
6. Zhang, Z., et al. 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; Eml2 (mouse) mapping to 7 A3.

SOURCE

EML2 (F-3) is a mouse monoclonal antibody raised against amino acids 317-370 mapping within an internal region of EML2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EML2 (F-3) is available conjugated to agarose (sc-374627 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374627 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374627 PE), fluorescein (sc-374627 FITC), Alexa Fluor[®] 488 (sc-374627 AF488), Alexa Fluor[®] 546 (sc-374627 AF546), Alexa Fluor[®] 594 (sc-374627 AF594) or Alexa Fluor[®] 647 (sc-374627 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374627 AF680) or Alexa Fluor[®] 790 (sc-374627 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

EML2 (F-3) is recommended for detection of EML2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 EML2 siRNA (h): sc-97090, EML2 siRNA (m): sc-144643, EML2 shRNA Plasmid (h): sc-97090-SH, EML2 shRNA Plasmid (m): sc-144643-SH, EML2 shRNA (h) Lentiviral Particles: sc-97090-V and EML2 shRNA (m) Lentiviral Particles: sc-144643-V.

Molecular Weight of EML2: 71 kDa.

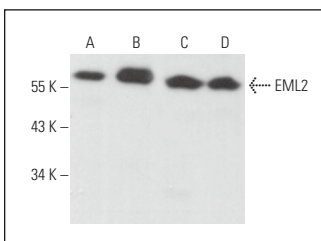
Positive Controls: A549 cell lysate: sc-2413, MCF7 whole cell lysate: sc-2206 or Neuro-2A whole cell lysate: sc-364185.

RECOMMENDED SUPPORT REAGENTS

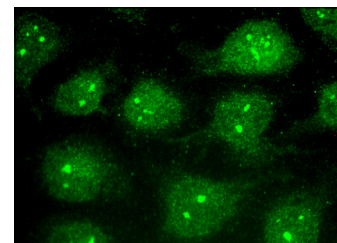
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



EML2 (F-3): sc-374627. Western blot analysis of EML2 expression in A549 (A), MCF7 (B), Neuro-2A (C) and KNRK (D) whole cell lysates.



EML2 (F-3): sc-374627. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar and 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.