

EML5 (D-12): sc-138923

BACKGROUND

EML5 (echinoderm microtubule-associated protein-like 5), also known as EMAP-5 or EMAP-2, is a 1,169 amino acid cytoplasmic protein that belongs to the WD repeat EMAP family. EML5 is thought to modify the assembly dynamics of microtubules, perhaps causing slightly longer and more dynamic microtubules. EML5 contains 29 WD repeats, a motif known to mediate protein-protein interactions, and is expressed as five isoforms produced by alternative splicing. The gene that encodes EML5 maps to human chromosome 14, which houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

1. van der Voorn, L. and Ploegh, H.L. 1992. The WD-40 repeat. *FEBS Lett.* 307: 131-134.
2. Neer, E.J., Schmidt, C.J., Nambudripad, R. and Smith, T.F. 1994. The ancient regulatory-protein family of WD-repeat proteins. *Nature* 371: 297-300.
3. Garcia-Higuera, I., Fenoglio, J., Li, Y., Lewis, C., Panchenko, M.P., Reiner, O., Smith, T.F. and Neer, E.J. 1996. Folding of proteins with WD-repeats: comparison of six members of the WD-repeat superfamily to the G protein beta subunit. *Biochemistry* 35: 13985-13994.
4. O'Connor, V., Houtman, S.H., De Zeeuw, C.I., Bliss, T.V. and French, P.J. 2004. Eml5, a novel WD40 domain protein expressed in rat brain. *Gene* 336: 127-137.
5. Avramopoulos, D., Fallin, M.D. and Bassett, S.S. 2005. Linkage to chromosome 14q in Alzheimer's disease (AD) patients without psychotic symptoms. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 132B: 9-13.
6. Larner, A.J. and Doran, M. 2009. Genotype-phenotype relationships of presenilin-1 mutations in Alzheimer's disease: an update. *J. Alzheimers Dis.* 17: 259-265.
7. Topic, A., Alempijevic, T., Milutinovic, A.S. and Kovacevic, N. 2009. α -1-antitrypsin phenotypes in adult liver disease patients. *Ups. J. Med. Sci.* 114: 228-234.

CHROMOSOMAL LOCATION

Genetic locus: EML5 (human) mapping to 14q31.3; Eml5 (mouse) mapping to 12 E.

SOURCE

EML5 (D-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of EML5 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138923 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EML5 (D-12) is recommended for detection of EML5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other EML family members.

Suitable for use as control antibody for EML5 siRNA (h): sc-92278, EML5 siRNA (m): sc-144645, EML5 shRNA Plasmid (h): sc-92278-SH, EML5 shRNA Plasmid (m): sc-144645-SH, EML5 shRNA (h) Lentiviral Particles: sc-92278-V and EML5 shRNA (m) Lentiviral Particles: sc-144645-V.

Molecular Weight of EML5 isoforms: 220/91/85 kDa.

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) 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.

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.