SANTA CRUZ BIOTECHNOLOGY, INC.

EMAP II (A-4): sc-393228

BACKGROUND

Endothelial monocyte-activating polypeptide (EMAP II), also known as small inducible cytokine subfamily E, member 1 (SCYE1), is a chemoattractant cytokine for monocytes and granulocytes that is inducible by apoptosis. TNFα treatment of murine meth A fibrosarcomas and B16 melanomas upregulates EMAP II mRNA production. The release of this cytokine renders the tumor-associated vasculature sensitive to tumor necrosis factor. EMAP II mRNA translates as a precursor protein, proEMAP II, which undergoes proteolysis to become the mature, biologically active cytokine. ProEMAP II may function in binding RNA as part of the tRNA synthetase complex in normal cells and in stimulating inflammatory responses after proteolytic cleavage in tumor cells.

REFERENCES

1. Knies, U.E., et al. 2000. Expression of EMAP II in the developing and adult mouse. Apoptosis 5: 141-151.
2. Brabeck, C., et al. 2002. Expression of EMAP II by activated monocytes/microglial cells in different regions of the rat hippocampus after trimethyltin-induced brain damage. Exp. Neurol. 177: 341-346.
3. Matschurat, S., et al. 2003. Regulation of EMAP II by hypoxia. Am. J. Pathol. 162: 93-103.
4. Mueller, C.A., et al. 2003. Spinal cord injury induces lesional expression of the proinflammatory and antiangiogenic cytokine EMAP II. J. Neurotrauma 20: 1007-1015.
5. Mueller, C.A., et al. 2003. Lesional expression of a proinflammatory and antiangiogenic cytokine EMAP II confined to endothelium and microglia/macrophages during secondary damage following experimental traumatic brain injury. J. Neuroimmunol. 135: 1-9.

CHROMOSOMAL LOCATION

Genetic locus: AIMP1 (human) mapping to 4q24; Aimp1 (mouse) mapping to 3 G3.

SOURCE

EMAP II (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 268-289 near the C-terminus of EMAP II of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393228 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

EMAP II (A-4) is recommended for detection of precursor and mature EMAP II 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), immunohistochemistry (including paraffin-embedded sections) (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 EMAP II siRNA (h): sc-61855, EMAP II siRNA (m): sc-61856, EMAP II shRNA Plasmid (h): sc-61855-SH, EMAP II shRNA Plasmid (m): sc-61856-SH, EMAP II shRNA (h) Lentiviral Particles: sc-61855-V and EMAP II shRNA (m) Lentiviral Particles: sc-61856-V.

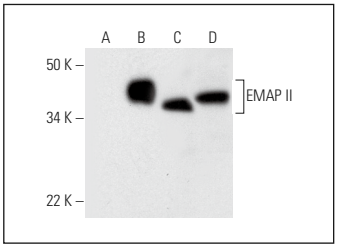
Molecular Weight of EMAP II: 38-40 kDa.

Positive Controls: EMAP II (m): 293T Lysate: sc-120016, U-937 cell lysate: sc-2239 or RAW 264.7 whole cell lysate: sc-2211.

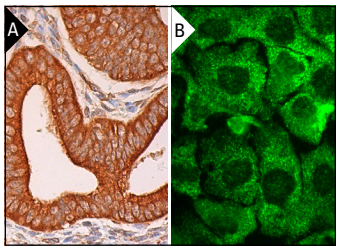
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



EMAP II (A-4): sc-393228. Western blot analysis of EMAP II expression in non-transfected 293T: sc-117752 (**A**), mouse EMAP II transfected 293T: sc-120016 (**B**), U-937 (**C**) and RAW 264.7 (**D**) whole cell lysates.



EMAP II (A-4): sc-393228. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pre-menopausal uterus tissue showing cytoplasmic staining of glandular cells (**A**) and immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. El Bakkouri, Y., et al. 2024. ZO-1 interacts with YB-1 in endothelial cells to regulate stress granule formation during angiogenesis. Nat. Commun. 15: 4405.

RESEARCH USE

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