

# EMG1 (E-16): sc-101948

## BACKGROUND

Ribosomes, the organelles that catalyze protein synthesis, are composed of a small subunit (40S) and a large subunit (60S) that consist of over 80 distinct ribosomal proteins. Mammalian ribosomal proteins are encoded by multigene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. EMG1, also known as C2F, NEP1 or Grcc2f, is a 244 amino acid protein that is thought to be involved in ribosome biogenesis. Localized to the nucleolus, EMG1 participates in pre-18S rRNA processing and may play an important role in the assembly of the small ribosomal subunit, possibly controlling methylation during ribosome synthesis. In yeast, a loss of EMG1 function resulted in cell death, suggesting that proper EMG1 function is required for cell viability.

## REFERENCES

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2. Andersen, J.S., et al. 2002. Directed proteomic analysis of the human nucleolus. *Curr. Biol.* 12: 1-11.
3. Eschrich, D., et al. 2002. Nep1p (Emg1p), a novel protein conserved in eukaryotes and archaea, is involved in ribosome biogenesis. *Curr. Genet.* 40: 326-338.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611531. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Bernstein, K.A., et al. 2004. The small-subunit processome is a ribosome assembly intermediate. *Eukaryotic Cell* 3: 1619-1626.
6. Buchhaupt, M., et al. 2006. Genetic evidence for 18S rRNA binding and an Rps19p assembly function of yeast nucleolar protein Nep1p. *Mol. Genet. Genomics* 276: 273-284.
7. Leulliot, N., et al. 2008. The yeast ribosome synthesis factor Emg1 is a novel member of the superfamily of  $\alpha/\beta$  knot fold methyltransferases. *Nucleic Acids Res.* 36: 629-639.

## CHROMOSOMAL LOCATION

Genetic locus: EMG1 (human) mapping to 12p13.31.

## SOURCE

EMG1 (E-16) is a purified rabbit polyclonal antibody raised against EMG1 of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG in 500  $\mu$ l PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## STORAGE

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

## APPLICATIONS

EMG1 (E-16) is recommended for detection of EMG1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 EMG1 siRNA (h): sc-96094, EMG1 shRNA Plasmid (h): sc-96094-SH and EMG1 shRNA (h) Lentiviral Particles: sc-96094-V.

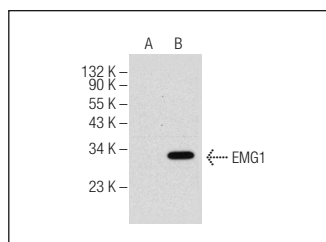
Molecular Weight of EMG1: 28 kDa.

Positive Controls: EMG1 (h): 293T Lysate: sc-370922 or Hep G2 cell lysate: sc-2227.

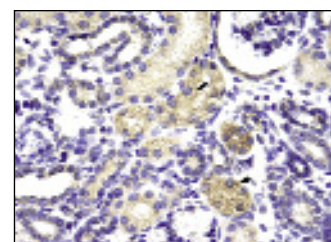
## RECOMMENDED SECONDARY REAGENTS

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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



EMG1 (E-16): sc-101948. Western blot analysis of EMG1 expression in non-transfected: sc-117752 (A) and human EMG1 transfected: sc-370922 (B) 293T whole cell lysates.



EMG1 (E-16): sc-101948. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.