

EMG1 (D-13): sc-132663

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 has been shown to result in cell death, suggesting that proper EMG1 function is required for cell viability.

REFERENCES

1. Liu, P.C., et al. 2001. Novel stress-responsive genes EMG1 and Nop14 encode conserved, interacting proteins required for 40S ribosome biogenesis. *Mol. Biol. Cell* 12: 3644-3657.
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[™]. 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 α/β knot fold methyltransferases. *Nucleic Acids Res.* 36: 629-639.

CHROMOSOMAL LOCATION

Genetic locus: EMG1 (human) mapping to 12p13.31; Emg1 (mouse) mapping to 6 F2.

SOURCE

EMG1 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EMG1 of human origin.

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.

PRODUCT

Each vial contains 200 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-132663 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EMG1 (D-13) is recommended for detection of EMG1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

EMG1 (D-13) is also recommended for detection of EMG1 in additional species, including avian.

Suitable for use as control antibody for EMG1 siRNA (h): sc-96094, EMG1 siRNA (m): sc-144639, EMG1 shRNA Plasmid (h): sc-96094-SH, EMG1 shRNA Plasmid (m): sc-144639-SH, EMG1 shRNA (h) Lentiviral Particles: sc-96094-V and EMG1 shRNA (m) Lentiviral Particles: sc-144639-V.

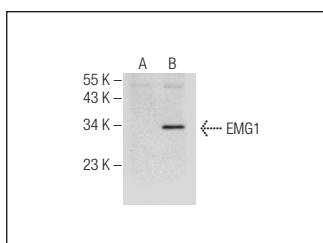
Molecular Weight of EMG1: 28 kDa.

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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



EMG1 (D-13): sc-132663. Western blot analysis of EMG1 expression in non-transfected: sc-117752 (A) and human EMG1 transfected: sc-370922 (B) 293T whole cell lysates.

RESEARCH USE

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