

# LSm14B (C-14): sc-85760

## BACKGROUND

Sm and Sm-like (LSm) proteins form donut-shaped, ubiquitously expressed heptameric complexes that are involved in various steps of RNA metabolism, including RNA-protein interactions and structural changes that are required during ribosomal subunit assembly. LSm14B, also known as C20orf40, FAM61B or LSM13, is a 385 amino acid protein that exists as multiple alternatively spliced isoforms and may play a role in RNA-related events. The gene encoding LSm14B maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

## REFERENCES

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2. Wolin, S.L. and Wurtmann, E.J. 2006. Molecular chaperones and quality control in noncoding RNA biogenesis. *Cold Spring Harb. Symp. Quant. Biol.* 71: 505-511.
3. Barbee, S.A. and Evans, T.C. 2006. The Sm proteins regulate germ cell specification during early *C. elegans* embryogenesis. *Dev. Biol.* 291: 132-143.
4. Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. *Epilepsia* 47: 543-549.
5. Arluison, V., et al. 2006. Three-dimensional structures of fibrillar Sm proteins: Hfq and other Sm-like proteins. *J. Mol. Biol.* 356: 86-96.
6. Tharun, S. 2008. Chapter 4 roles of eukaryotic LSm proteins in the regulation of mRNA function. *Int. Rev. Cell Mol. Biol.* 272: 149-189.
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## CHROMOSOMAL LOCATION

Genetic locus: LSM14B (human) mapping to 20q13.33; Lsm14b (mouse) mapping to 2 H4.

## SOURCE

LSm14B (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of LSm14B of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

LSm14B (C-14) is recommended for detection of LSm14B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LSm14B (C-14) is also recommended for detection of LSm14B in additional species, including porcine.

Suitable for use as control antibody for LSm14B siRNA (h): sc-75704, LSm14B siRNA (m): sc-149133, LSm14B shRNA Plasmid (h): sc-75704-SH, LSm14B shRNA Plasmid (m): sc-149133-SH, LSm14B shRNA (h) Lentiviral Particles: sc-75704-V and LSm14B shRNA (m) Lentiviral Particles: sc-149133-V.

Molecular Weight (predicted) of LSm14B: 42 kDa.

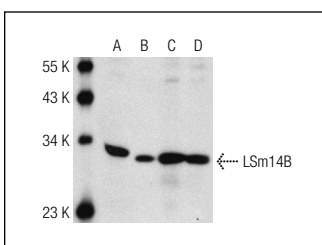
Molecular Weight (observed) of LSm14B: 31-33 kDa.

Positive Controls: F9 cell lysate: sc-2245, mouse testis extract: sc-2405 or rat testis extract: sc-2400.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



LSm14B (C-14): sc-85760. Western blot analysis of LSm14B expression in F9 (A) and LADMAC (B) whole cell lysates and mouse testis (C) and rat testis (D) tissue extracts.

## 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.