

SEN15 (D-3): sc-374085

BACKGROUND

SEN15, also known as TSEN15 (tRNA-splicing endonuclease subunit SEN15) or C1orf19, is a nuclear protein that plays a role in tRNA splicing. Widely expressed with highest expression in testis and uterus, SEN15 is a non-catalytic subunit of the multi-protein tRNA-splicing endonuclease complex. The endonuclease complex is responsible for identifying and cleaving pre-tRNA at both 5' and 3' splice sites, thereby releasing introns and free tRNA molecules with 2',3' cyclic phosphates and 5'-OH termini. In addition to its role in pre-tRNA splicing, the endonuclease complex participates in mRNA processing and, via its association with pre-mRNA processing factors, is thought to link pre-tRNA and pre-mRNA splicing events. As a subunit of the complex, SEN15 participates in protein expression and, ultimately, cell growth and division.

REFERENCES

1. Sood, R., et al. 2001. Cloning and characterization of 13 novel transcripts and the human RGS8 gene from the 1q25 region encompassing the hereditary prostate cancer (HPC1) locus. *Genomics* 73: 211-222.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608756. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Paushkin, S.V., et al. 2004. Identification of a human endonuclease complex reveals a link between tRNA splicing and pre-mRNA 3' end formation. *Cell* 117: 311-321.
4. Trotta, C.R., et al. 2006. Cleavage of pre-tRNAs by the splicing endonuclease requires a composite active site. *Nature* 441: 375-377.
5. Song, J., et al. 2007. Three-dimensional structure determined for a subunit of human tRNA splicing endonuclease (SEN15) reveals a novel dimeric fold. *J. Mol. Biol.* 366: 155-164.

CHROMOSOMAL LOCATION

Genetic locus: TSEN15 (human) mapping to 1q25.3; Tsen15 (mouse) mapping to 1 G3.

SOURCE

SEN15 (D-3) is a mouse monoclonal antibody raised against amino acids 1-171 representing full length SEN15 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374085 X, 200 µg/0.1 ml.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

SEN15 (D-3) is recommended for detection of SEN15 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SEN15 siRNA (h): sc-88364, SEN15 siRNA (m): sc-153335, SEN15 shRNA Plasmid (h): sc-88364-SH, SEN15 shRNA Plasmid (m): sc-153335-SH, SEN15 shRNA (h) Lentiviral Particles: sc-88364-V and SEN15 shRNA (m) Lentiviral Particles: sc-153335-V.

SEN15 (D-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

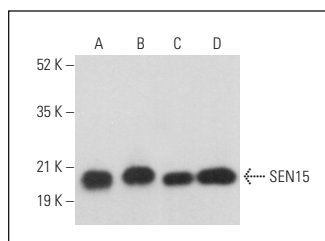
Molecular Weight of SEN15: 18 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, 3T3-L1 cell lysate: sc-2243 or Neuro-2A whole cell lysate: sc-364185.

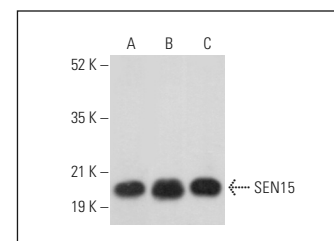
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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.

DATA



SEN15 (D-3): sc-374085. Western blot analysis of SEN15 expression in AN3 CA (A), Caco-2 (B), L6 (C) and PC-12 (D) whole cell lysates.



SEN15 (D-3): sc-374085. Western blot analysis of SEN15 expression in MCF7 (A), 3T3-L1 (B) and Neuro-2A (C) whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.