



NSL1 (S-14): sc-104465

BACKGROUND

NSL1, also designated DC8, is a 281 amino acid protein that is associated with chromosomal kinetochores and functions as a component of the MIS12 protein complex, which ensures proper kinetochore formation and spindle checkpoint activity. Members of the MIS12 protein complex also include MIS12, DSN1 and PMF1. The gene encoding NSL1 maps to human chromosome 1, the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. Approximately 3,000 genes are located on chromosome 1, which include several disease genes. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes Lamin A as well as Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

- Weise, A., Starke, H., Mrasek, K., Claussen, U. and Liehr, T. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
- Marzin, Y., Jamet, D., Douet-Guilbert, N., Morel, F., Le Bris, M.J., Morice, P., Abgrall, J.F., Berthou, C. and De Braekeleer, M. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
- Kline, S.L., Cheeseman, I.M., Hori, T., Fukagawa, T. and Desai, A. 2006. The human MIS12 complex is required for kinetochore assembly and proper chromosome segregation. *J. Cell Biol.* 173: 9-17.
- Lans, H. and Hoeijmakers, J.H. 2006. Cell biology: ageing nucleus gets out of shape. *Nature* 440: 32-34.
- Gregory, S.G., Barlow, K.F., McLay, K.E., Kaul, R., Swarbreck, D., Dunham, A., Scott, C.E., Howe, K.L., Woodfine, K., Spencer, C.C., Jones, M.C., Gillson, C., Searle, S., Zhou, Y., Kokocinski, F., McDonald, L., Evans, R., Phillips, K., Atkinson, A., Cooper, R., Jones, C., Hall, R.E., Andrews, et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
- McClintock, D., Gordon, L.B. and Djabali, K. 2006. Hutchinson-Gilford progeria mutant Lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody. *Proc. Natl. Acad. Sci. USA* 103: 2154-2159.
- Scaffidi, P. and Misteli, T. 2006. Lamin A-dependent nuclear defects in human aging. *Science* 312: 1059-1063.

CHROMOSOMAL LOCATION

Genetic locus: NSL1 (human) mapping to 1q32.3; Nsl1 (mouse) mapping to 1 H6.

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.

SOURCE

NSL1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NSL1 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-104465 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NSL1 (S-14) is recommended for detection of NSL1 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).

Suitable for use as control antibody for NSL1 siRNA (h): sc-88843, NSL1 siRNA (m): sc-106311, NSL1 shRNA Plasmid (h): sc-88843-SH, NSL1 shRNA Plasmid (m): sc-106311-SH, NSL1 shRNA (h) Lentiviral Particles: sc-88843-V and NSL1 shRNA (m) Lentiviral Particles: sc-106311-V.

Molecular Weight of NSL1: 32 kDa.

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.

PROTOCOLS

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