

KANSL1 (S-14): sc-160469

BACKGROUND

Histone acetylation is a critical part of gene regulation. Acetylation of lysine residues at the N-terminus of histone proteins affect the affinity between histones and DNA, enhancing gene transcription. KANSL1 (KAT8 regulatory NSL complex subunit 1), also known as KDVS, NSL1, MSL1v1, CENP-36, hMSL1v1 or KIAA1267, is a 1,105 amino acid nuclear protein that is part of the NSL1 complex and the MLL complex. NSL1 complex is involved in acetylation of nucleosomal Histone H4 and plays a role in transcriptional regulation while MLL complex functions as a methyltransferase for Histone H3. Expressed in brain, KANSL1 directly interacts with histone acetyl transferase MOF (also known as KAT8). Mutations in the gene encoding KANSL1 may lead to KANSL1-related intellectual disability syndrome, which is characterized by developmental delay/intellectual disability, neonatal/childhood hypotonia, dysmorphisms, congenital malformations, and behavioral features. KANSL1 exists as two alternatively spliced isoforms.

REFERENCES

- Mizzen, C.A., et al. 1998. Linking histone acetylation to transcriptional regulation. *Cell. Mol. Life Sci.* 54: 6-20.
- Gregory, P.D., et al. 2001. Histone acetylation and chromatin remodeling. *Exp. Cell Res.* 265: 195-202.
- Eberharter, A., et al. 2002. Histone acetylation: a switch between repressive and permissive chromatin. Second in review series on chromatin dynamics. *EMBO Rep.* 3: 224-229.
- Morales, V., et al. 2004. Functional integration of the histone acetyltransferase MOF into the dosage compensation complex. *EMBO J.* 23: 2258-2268.
- Dou, Y., et al. 2005. Physical association and coordinate function of the H3 K4 methyltransferase MLL1 and the H4 K16 acetyltransferase MOF. *Cell* 121: 873-885.

CHROMOSOMAL LOCATION

Genetic locus: KANSL1 (human) mapping to 17q21.31; Kansl1 (mouse) mapping to 11 E1.

SOURCE

KANSL1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KANSL1 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-160469 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

KANSL1 (S-14) is recommended for detection of KANSL1 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); non cross-reactive with other KIAA family members.

KANSL1 (S-14) is also recommended for detection of KANSL1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for KANSL1 siRNA (h): sc-93782, KANSL1 siRNA (m): sc-108490, KANSL1 shRNA Plasmid (h): sc-93782-SH, KANSL1 shRNA Plasmid (m): sc-108490-SH, KANSL1 shRNA (h) Lentiviral Particles: sc-93782-V and KANSL1 shRNA (m) Lentiviral Particles: sc-108490-V.

Molecular Weight of KANSL1 human isoforms: 121/47 kDa.

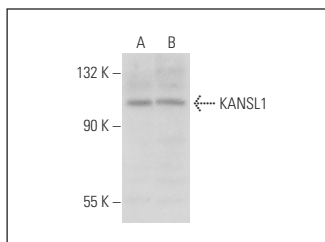
Molecular Weight of mouse KANSL1: 113 kDa.

Positive Controls: mouse brain extract: sc-2253, HeLa nuclear extract: sc-2120 or Jurkat nuclear extract: sc-2132.

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



KANSL1 (S-14): sc-160469. Western blot analysis of KANSL1 expression in HeLa (A) and Jurkat (B) nuclear extracts.

RESEARCH USE

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

PROTOCOLS

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