SANTA CRUZ BIOTECHNOLOGY, INC.

Sm D1 (C-15): sc-20822

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

U1, U2, U4, U5, U6 and U7 are small nuclear ribonucleoproteins (snRNPs) that comprise the spliceosome in eukaryotes. Each UsnRNP contains common Sm proteins B/B', D1, D2, D3, E, F and G. The Sm proteins pair up as D1-D2, B/B'-D3 and E-F-G to form RNA-free hetero-oligomers in the cytoplasm. Sm proteins aid in the cytoplasmic construction of the UsnRNPs by binding to a conserved Sm site on UsnRNA and forming a stable snRNP core complex. Sm D1, D2 and D3 are present in U1, U2, U4/5 and U5 but not U7 snRNPs in human and mouse cells. U7 snRNPs contain Lsm10, an Sm D1-like protein. Autoantibodies produced in patients suffering from systemic lupus erythematosus react predominantly with Sm B/B', D1 and D3. The major linear epitope of these autoantibodies includes the C-terminal RG dipeptide repeats found in Sm D1 and D3.

CHROMOSOMAL LOCATION

Genetic locus: SNRPD1 (human) mapping to 18q11.2; Snrpd1 (mouse) mapping to 18 A1.

SOURCE

Sm D1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Sm D1 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-20822 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

Sm D1 (C-15) is recommended for detection of Sm D1 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).

Sm D1 (C-15) is also recommended for detection of Sm D1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Sm D1 siRNA (h): sc-38325, Sm D1 siRNA (m): sc-38326, Sm D1 shRNA Plasmid (h): sc-38325-SH, Sm D1 shRNA Plasmid (m): sc-38326-SH, Sm D1 shRNA (h) Lentiviral Particles: sc-38325-V and Sm D1 shRNA (m) Lentiviral Particles: sc-38326-V.

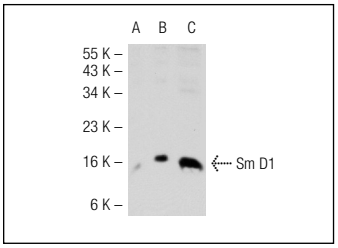
Molecular Weight of Sm D1: 13 kDa.

Positive Controls: Sm D1 (h): 293T Lysate: sc-111571, Jurkat nuclear extract: sc-2132 or BJAB nuclear extract: sc-2145.

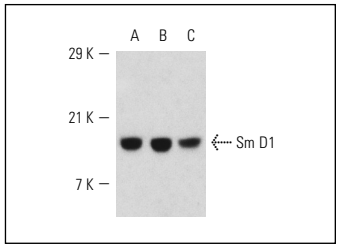
RECOMMENDED SECONDARY REAGENTS

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



Sm D1 (C-15): sc-20822. Western blot analysis of Sm D1 expression in non-transfected 293T: sc-117752 (**A**), human Sm D1 transfected 293T: sc-111571 (**B**) and BJAB (**C**) whole cell lysates.



Sm D1 (C-15): sc-20822. Western blot analysis of Sm D1 expression in BJAB (**A**), Jurkat (**B**) and K-562 (**C**) 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.

MONOS Satisfaction Guaranteed

Try **Sm D1 (A-9): sc-166650**, our highly recommended monoclonal aternative to Sm D1 (C-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Sm D1 (A-9): sc-166650**.