

SIRT7 (H-105): sc-135055

BACKGROUND

Sirtuins (SIRT1-7) are human homologs of the yeast Sir2 (silent information regulator 2) protein and are divided into four main classes: SIRT1-3 are class I, SIRT4 is class II, SIRT5 is class III and SIRT6-7 are class IV. In *S. cerevisiae*, Sir2 deacetylates histones in an NAD-dependent manner, which regulates silencing at the telomeric, rDNA (ribosomal DNA) and silent mating-type loci. The human SIRT proteins are NAD-dependent deacetylases that act as intracellular regulators and are thought to have ribosyltransferase activity. SIRT7 (NAD-dependent deacetylase sirtuin 7), also known as SIR2L7, is a member of the class IV sirtuin family and is localized to the nucleolus. Expressed throughout the body, SIRT7 associates with rDNA genes where it interacts with histones and acts as a positive regulator of RNA polymerase I (Pol I). SIRT7 is a probable NAD-dependent deacetylase whose expression is upregulated in thyroid carcinoma cells. Overexpression of SIRT7 increases Pol I-mediated transcription, thereby speeding cell growth and contributing to the development of cancer. Two isoforms exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: SIRT7 (human) mapping to 17q25.3; Sirt7 (mouse) mapping to 11 E2.

SOURCE

SIRT7 (H-105) is a rabbit polyclonal antibody raised against amino acids 1-105 mapping at the N-terminus of SIRT7 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.

STORAGE

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

APPLICATIONS

SIRT7 (H-105) is recommended for detection of SIRT7 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).

SIRT7 (H-105) is also recommended for detection of SIRT7 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SIRT7 siRNA (h): sc-63030, SIRT7 siRNA (m): sc-63031, SIRT7 shRNA Plasmid (h): sc-63030-SH, SIRT7 shRNA Plasmid (m): sc-63031-SH, SIRT7 shRNA (h) Lentiviral Particles: sc-63030-V and SIRT7 shRNA (m) Lentiviral Particles: sc-63031-V.

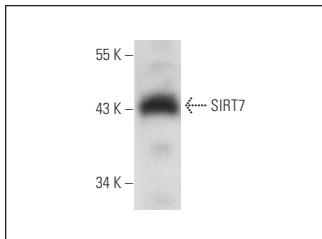
Molecular Weight of SIRT7: 45 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, Caki-1 cell lysate: sc-2224 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SIRT7 (H-105): sc-135055. Western blot analysis of SIRT7 expression in NIH/3T3 nuclear extract.

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.

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Try **SIRT7 (C-3): sc-365344**, our highly recommended monoclonal alternative to SIRT7 (H-105). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SIRT7 (C-3): sc-365344**.