

# SIRT7 (G-20): sc-66281

## 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 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-66281 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SIRT7 (G-20) 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 (G-20) is also recommended for detection of SIRT7 in additional species, including canine, bovine, porcine and avian.

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.

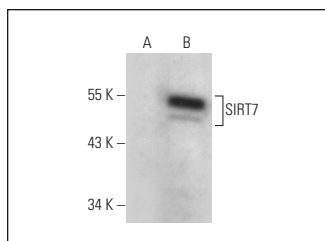
Molecular Weight of SIRT7: 45 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 or SIRT7 (h): 293T Lysate: sc-173921.

## 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



SIRT7 (G-20): sc-66281. Western blot analysis of SIRT7 expression in non-transfected: sc-117752 (A) and human SIRT7 transfected: sc-173921 (B) 293T whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://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 (G-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SIRT7 (C-3): sc-365344**.