# SANTA CRUZ BIOTECHNOLOGY, INC.

# SIRT2 (92.259): sc-135794



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# BACKGROUND

The silent information regulator (SIR2) family of genes are highly conserved from prokaryotes to eukaryotes and are involved in diverse processes, including transcriptional regulation, cell cycle progression, DNA-damage repair and aging. In *S. cerevisiae*, Sir2p deacetylates histones in a NAD-dependent manner, which regulates silencing at the telomeric, rDNA and silent mating-type loci. Sir2p is the founding member of a large family, designated sirtuins, which contain a conserved catalytic domain. The human homologs, which include SIRT1-7, are divided into four main branches: SIRT1-3 are class I, SIRT4 is class II, SIRT5 is class III and SIRT6-7 are class IV. SIRT proteins may function via mono-ADP-ribosylation of proteins. SIRT2 contains a 323 amino acid catalytic core domain with a NAD-binding domain and a large groove which is the likely site of catalysis.

# REFERENCES

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- Frye, R.A. 1999. Characterization of five human cDNAs with homology to the yeast SIR2 gene: SIR2-like proteins (sirtuins) metabolize NAD and may have protein ADP-ribosyltransferase activity. Biochem. Biophys. Res. Commun. 260: 273-279.
- 3. Frye, R.A. 2000. Phylogenetic classification of prokaryotic and eukaryotic SIR2-like proteins. Biochem. Biophys. Res. Commun. 273: 793-798.
- Grozinger, C.M., Chao, E.D., Blackwell, H.E., Moazed, D. and Schreiber, S.L. 2001. Identification of a class of small molecule inhibitors of the sirtuin family of NAD-dependent deacetylases by phenotypic screening. J. Biol. Chem. 276: 38837-38843.
- 5. Defossez, P.A., Lin, S.J. and McNabb, D.S. 2001. Sound silencing: the SIR2 protein and cellular senescence. Bioessays 23: 327-332.
- Finnin, M.S., Donigian, J.R. and Pavletich, N.P. 2001. Structure of the histone deacetylase SIRT2. Nat. Struct. Biol. 8: 621-625.

#### CHROMOSOMAL LOCATION

Genetic locus: SIRT2 (human) mapping to 19q13.2; Sirt2 (mouse) mapping to 7 A3.

# SOURCE

SIRT2 (92.259) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 69-82 of SIRT2 of human origin.

# PRODUCT

Each vial contains 200  $\mu g~lgG_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

# STORAGE

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### APPLICATIONS

SIRT2 (92.259) is recommended for detection of SIRT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SIRT2 siRNA (h): sc-40988, SIRT2 siRNA (m): sc-40989, SIRT2 shRNA Plasmid (h): sc-40988-SH, SIRT2 shRNA Plasmid (m): sc-40989-SH, SIRT2 shRNA (h) Lentiviral Particles: sc-40988-V and SIRT2 shRNA (m) Lentiviral Particles: sc-40989-V.

Molecular Weight of SIRT2: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

#### **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

#### **RESEARCH USE**

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

# PROTOCOLS

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



See **SIRT2 (A-5): sc-28298** for SIRT2 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.