SANTA CRUZ BIOTECHNOLOGY, INC.

SIRT2 (H-95): sc-20966



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 homologues, 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.

CHROMOSOMAL LOCATION

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

SOURCE

SIRT2 (H-95) is a rabbit polyclonal antibody raised against amino acids 1-95 of SIRT2 of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SIRT2 (H-95) 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), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SIRT2 (H-95) is also recommended for detection of SIRT2 in additional species, including equine, bovine and porcine.

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: 3611-RF whole cell lysate: sc-2215, HeLa whole cell lysate: sc-2200 or SIRT2 (m): 293T Lysate: sc-127544.

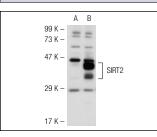
STORAGE

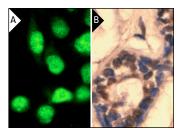
Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

DATA





SIRT2 (H-95): sc-20966. Western blot analysis of SIRT2 expression in non-transfected: sc-117752 (A) and mouse SIRT2 transfected: sc-127544 (B) 293T whole cell lysates.

SIRT2 (H-95): sc-20966. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tumor showing nuclear localization (B).

SELECT PRODUCT CITATIONS

- Wang, F., et al. 2007. SIRT2 deacetylates FOXO3a in response to oxidative stress and caloric restriction. Aging Cell 6: 505-514.
- 2. Werner, H.B., et al. 2007. Proteolipid protein is required for transport of sirtuin 2 into CNS myelin. J. Neurosci. 27: 7717-7730.
- Peck, B., et al. 2010. SIRT inhibitors induce cell death and p53 acetylation through targeting both SIRT1 and SIRT2. Mol. Cancer Ther. 9: 844-855.
- 4. Alhazzazi, T.Y., et al. 2010. Sirtuin-3 (SIRT3), a novel potential therapeutic target for oral cancer. Cancer 117: 1670-1678.
- Rothgiesser, K.M., et al. 2010. SIRT2 regulates NF-κB dependent gene expression through deacetylation of p65 Lys310. J. Cell Sci. 123: 4251-4258.
- Xiong, S., et al. 2011. FoxO1 mediates an autofeedback loop regulating SIRT1 expression. J. Biol. Chem. 286: 5289-5299.
- Nie, H., et al. 2011. Silencing of SIRT2 induces cell death and a decrease in the intracellular ATP level of PC12 cells. Int. J. Physiol. Pathophysiol. Pharmacol. 3: 65-70.
- 8. Alhazzazi, T.Y., et al. 2011. Sirtuin-3 (SIRT3), a novel potential therapeutic target for oral cancer. Cancer 117: 1670-1678.
- 9. He, X., et al. 2012. SIRT2 activity is required for the survival of C6 glioma cells. Biochem. Biophys. Res. Commun. 417: 468-472.

MONOS Satisfation Guaranteed

Try **SIRT2 (A-5): sc-28298**, our highly recommended monoclonal aternative to SIRT2 (H-95). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **SIRT2 (A-5): sc-28298**.