

SIRT2 (36.92): sc-135793

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. 2000. Phylogenetic classification of prokaryotic and eukaryotic SIR2-like proteins. *Biochem. Biophys. Res. Commun.* 273: 793-798.
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- Defossez, P.A., Lin, S.J. and McNabb, D.S. 2001. Sound silencing: the SIR2 protein and cellular senescence. *Bioessays* 23: 327-332.
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CHROMOSOMAL LOCATION

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

SOURCE

SIRT2 (36.92) 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 µg IgG₁ kappa light chain 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

SIRT2 (36.92) 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:
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

SELECT PRODUCT CITATIONS

- Vargas-Ortiz, K., Perez-Vazquez, V., Diaz-Cisneros, F.J., Figueroa, A., Jiménez-Flores, L.M., Rodríguez-DelaRosa, G. and Macías, M.H. 2015. Aerobic training increases expression levels of SIRT3 and PGC-1α in skeletal muscle of overweight adolescents without change in caloric intake. *Pediatr. Exerc. Sci.* 27: 177-184.
- Vargas-Ortiz, K., Pérez-Vázquez, V., Figueroa, A., Díaz, F.J., Montañó-Ascencio, P.G. and Macías-Cervantes, M.H. 2018. Aerobic training but no resistance training increases SIRT3 in skeletal muscle of sedentary obese male adolescents. *Eur. J. Sport Sci.* 18: 226-234.

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, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.