



SIRT1 (448-747): sc-4494 WB

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 *Saccharomyces cerevisiae*, Sir2p deacetylates histones in an 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. SIRT1 has the closest homology to the yeast Sir2p and is widely expressed in fetal and adult tissues with high expression in heart, brain and skeletal muscle and low expression in lung and placenta. SIRT1 regulates the p53-dependent DNA damage response pathway by binding to and deacetylating p53, specifically at lysine 382.

REFERENCES

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SOURCE

SIRT1 (448-747) is expressed in *E. coli* as a 60 kDa tagged fusion protein corresponding to amino acids 448-747 of SIRT1 of human origin.

PRODUCT

SIRT1 (448-747) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

SIRT1 (448-747) is suitable as a Western blotting control for sc-15404 and sc-19858.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

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