
SIRT1 Polyclonal Antibody

(Catalog # A-4700)

Background

The Silent Information Regulator (SIR2) family of genes is a highly conserved group of genes that encode nicotinamide adenine dinucleotide (NAD)-dependent protein deacetylases, also known as class III histone deacetylases. The first discovered and best characterized of these genes is *Saccharomyces cerevisiae* SIR2, which is involved in silencing of mating type loci, telomere maintenance, DNA damage response, and cell aging. SirT1, the mammalian ortholog of Sir2, is a nuclear protein implicated in the regulation of many cellular processes, including apoptosis, cellular senescence, endocrine signaling, glucose homeostasis, aging, and longevity. Targets of SirT1 include acetylated p53, p300, Ku70, forkhead (FoxO) transcription factors, PPARgamma, and the PPARgamma coactivator-1alpha (PGC-1alpha) protein. Deacetylation of p53 and FoxO transcription factors represses apoptosis and increases cell survival. Deacetylation of PPARgamma and PGC-1alpha regulates the gluconeogenic/glycolytic pathways in the liver and fat mobilization in white adipocytes in response to fasting. SirT1 deacetylase activity is inhibited by nicotinamide and activated by resveratrol. In addition, SirT1 activity may be regulated by phosphorylation, since it is phosphorylated on Ser27 and Ser47 in vivo, however, the function of these phosphorylation sites has not yet been determined.

Description

SIRT1 Polyclonal Antibody. Unconjugated. Raised in: Rabbit.

Formulation

Buffer: PBS with 0.05% proclin300, 50% glycerol, pH7.3.

Specificity

Human, Mouse

Isotype

IgG

Uniprot ID

Q96EB6

Purification

Affinity Purification

Immunogen

A synthetic peptide of human SIRT1

Storage

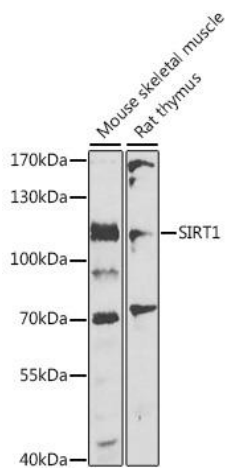
Shipped at 4°C. Upon receipt, store at -20°C. Avoid freeze / thaw cycles

Alternative Names

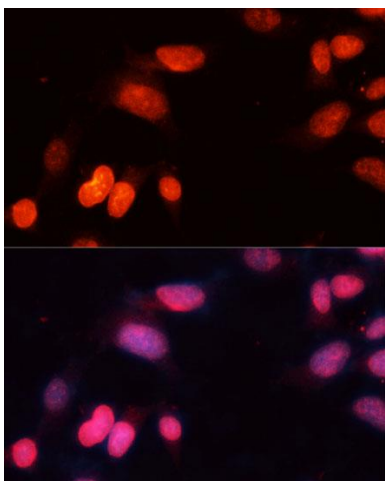
SIRT1, SIR2L1

Application

WB, IF; Recommended dilution: WB: 1:500-1:2000, IF:1:50-1:200



Western blot analysis of extracts of various cell lines, using SIRT1 antibody at 1:1000 dilution.
Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution.
Lysates/proteins: 25ug per lane.
Blocking buffer: 3% nonfat dry milk in TBST.



Immunofluorescence analysis of NIH-3T3 cells using SIRT1 Polyclonal Antibody at dilution of 1:100 (40x lens). Blue: DAPI for nuclear staining