

SIRT2 monoclonal antibody

Catalog: MB66509

Host: Mouse

Reactivity: Human, Mouse, Rat

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. SirT2, a mammalian homolog of Sir2, deacetylates α -tubulin at Lys40 and histone H4 at Lys16 and has been implicated in cytoskeletal regulation and progression through mitosis. SirT2 protein is mainly cytoplasmic and is associated with microtubules and HDAC6, another tubulin deacetylase. Deacetylation of α -tubulin decreases its stability and may be required for proper regulation of cell shape, intracellular transport, cell motility, and cell division. The abundance and phosphorylation state of SirT2 increase at the G2/M transition of the cell cycle, and SirT2 relocates to chromatin during mitosis when histone H4 Lys16 acetylation levels decrease. Overexpression of SirT2 prolongs mitosis, while overexpression of the CDC14B phosphatase results in both decreased phosphorylation and abundance of SirT2, allowing for proper mitotic exit. Thus, the deacetylation of both histone H4 and α -tubulin by SirT2 may be critical for proper chromatin and cytoskeletal dynamics required for completion of mitosis.

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 43 kDa

Swiss-Prot:

Q8IXJ6

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/100)

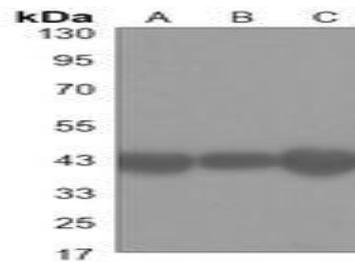
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

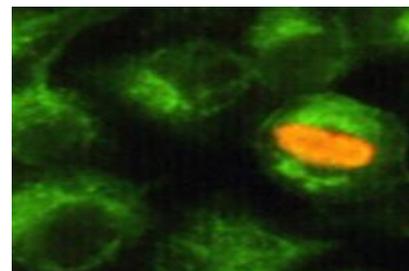
Specificity:

Recognizes endogenous levels of SIRT2 protein.

DATA:



Western blot analysis of SIRT2 expression in PC12 (A), rat brain (B), mouse brain (C) whole cell lysates.



Immunofluorescent analysis of SIRT2 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Note:

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

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