

For Research Use Only

SIRT2 Polyclonal antibody

Catalog Number: 19655-1-AP

Featured Product

74 Publications



Basic Information

Catalog Number:

19655-1-AP

Concentration:

700 ug/ml

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG7756

GenBank Accession Number:

BC003547

GeneID (NCBI):

22933

UNIPROT ID:

Q8IXJ6

Full Name:

sirtuin (silent mating type
information regulation 2 homolog) 2
(S. cerevisiae)

Calculated MW:

43 kDa

Observed MW:

37-45 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:5000-1:50000

IP 0.5-4.0 ug for 1.0-3.0 mg of total
protein lysate

IHC 1:500-1:2000

Applications

Tested Applications:

WB, IHC, IP, ELISA

Cited Applications:

WB, IHC, IF, IP, CoIP, RIP

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat, monkey, zebrafish, bovine, goat

**Note-IHC: suggested antigen retrieval with
TE buffer pH 9.0; (*) Alternatively, antigen
retrieval may be performed with citrate
buffer pH 6.0**

Positive Controls:

WB : mouse brain tissue, human brain tissue, rat brain
tissue

IP : mouse brain tissue,

IHC : rat brain tissue, human skeletal muscle tissue,
mouse brain tissue, human heart tissue

Background Information

The Silent Information Regulator (SIRT2) 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* SIRT2, which is involved in silencing of mating type loci, telomere maintenance, DNA damage response, and cell aging (10545947). 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 (12620231,16648462). SirT2 protein is mainly cytoplasmic and is associated with microtubules and HDAC6, another tubulin deacetylase (12620231). Deacetylation of α -tubulin decreases its stability and may be required for proper regulation of cell shape, intracellular transport, cell motility, and cell division (12620231,10966460). 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 (16648462,12697818). 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 (12697818). 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. This antibody recognizes the 37-45 KD SIRT2 proteins. This antibody is a specific antibody that it can't detect signal with SIRT2-KO samples.

Notable Publications

Author	Pubmed ID	Journal	Application
Xiaodan Sun	31572453	Front Genet	IHC
Min Liu	28871079	Nat Commun	WB
Kelly A Chamberlain	34506725	Neuron	WB,IF

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

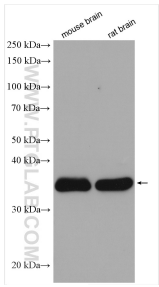
T: 4006900926

E: Proteintech-CN@ptglab.com

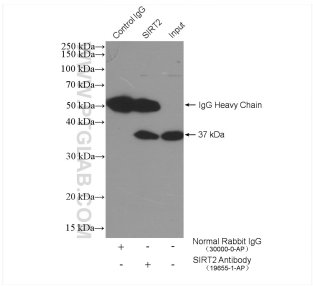
W: ptgcn.com

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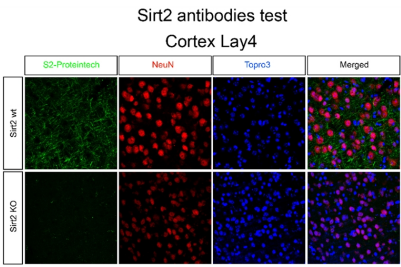
Selected Validation Data



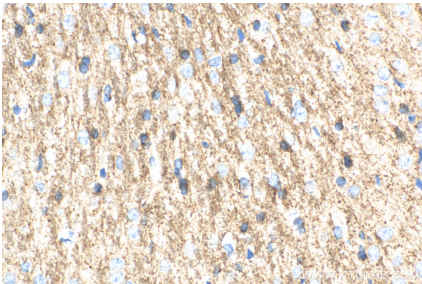
Various lysates were subjected to SDS PAGE followed by western blot with 19655-1-AP (SIRT2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



IP result of anti-SIRT2 (IP:19655-1-AP, 4ug; Detection:19655-1-AP 1:800) with mouse brain tissue lysate 4000 ug.



IF results of SIRT2 (19655-1-AP) antibody with cortex slides of SIRT2-WT and SIRT2-KO samples.



Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 19655-1-AP (SIRT2 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).