

SIRT2 Polyclonal antibody

Catalog Number: 19655-1-AP

Featured Product

37 Publications

Basic Information

| | | |
|--|--|--|
| Catalog Number: 19655-1-AP | GenBank Accession Number: BC003547 | Purification Method: Antigen affinity purification |
| Size: 150ul , Concentration: 500 µg/ml by Nanodrop and 293 µg/ml by Bradford method using BSA as the standard; | GeneID (NCBI): 22933 | Recommended Dilutions: WB 1:5000-1:50000 IP 0.5-4.0 ug for IP and 1:500-1:1000 for WB |
| Source: Rabbit | Full Name: sirtuin (silent mating type information regulation 2 homolog) 2 (S. cerevisiae) | IHC 1:20-1:200 |
| Isotype: IgG | Calculated MW: 43 kDa | |
| Immunogen Catalog Number: AG7756 | Observed MW: 37-45 kDa | |

Applications

Tested Applications:

IHC, IP, WB, ELISA

Cited Applications:

CoIP, IF, IHC, IP, WB

Species Specificity:

human, mouse, rat

Cited Species:

bovine, human, mouse, rat, zebrafish

Positive Controls:

WB : mouse brain tissue, human brain tissue, rat brain tissue**IP** : mouse brain tissue,**IHC** : human heart tissue, human skeletal muscle tissue

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

Background Information

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 (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 Commn | 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 pH 7.3.

Aliquoting is unnecessary for -20°C storage

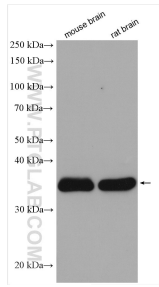
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

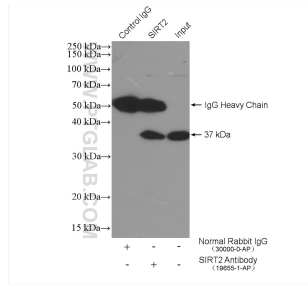
E: proteintech@ptglab.com
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

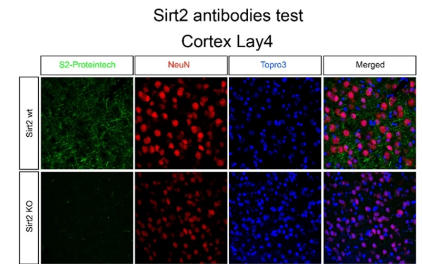
Selected Validation Data



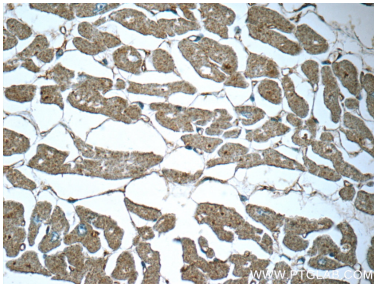
Various lysates were subjected to SDS PAGE followed by western blot with 19655-1-AP (SIRT2 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



IP result of anti-SIRT2-Specific (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 human heart tissue slide using 19655-1-AP (SIRT2-Specific antibody at dilution of 1:50).