

# IHC*easy* SIRT2 Ready-To-Use IHC Kit

Catalog Number: **KHC1821**

## General Information

**Sample type:**  
FFPE tissue

**Cited sample type:**

**Reactivity:**  
Human, Mouse, Rat

**Cited Reactivity:**

**Assay type:**  
Immunohistochemistry

**Primary antibody type:**  
Rabbit Polyclonal

**Secondary antibody type:**  
Polymer-HRP-Goat anti-Rabbit

## Kit Component

Component	Size	Concentration
Antigen Retrieval Buffer	100 mL	50×
Washing Buffer	100 mL ×2	20×
Blocking Buffer	5 mL	RTU
Primary Antibody	5 mL	RTU
Secondary Antibody	5 mL	RTU
Chromogen Component A	0.2 mL	RTU
Chromogen Component B	4 mL	RTU
Signal Enhancer	5 mL	RTU
Counter Staining Reagent	5 mL	RTU
Mounting Media	5 mL	RTU
Control Slide	1 slide (Optional)	FFPE
Datasheet	1 Copy	
Manual	1 Copy	

## Storage Instructions

All the reagents are stored at 2-8°C. The kit is stable for 6 months from the date of receipt.

## 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  $\alpha$ -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  $\alpha$ -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 relocalizes 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  $\alpha$ -tubulin by SirT2 may be critical for proper chromatin and cytoskeletal dynamics required for completion of mitosis.

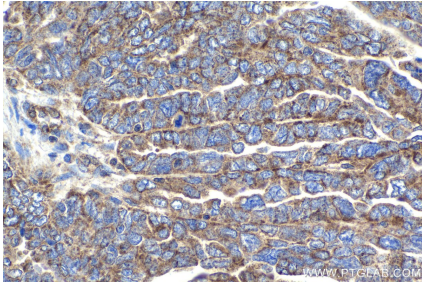
## Synonyms

SIR2, SIR2 like protein 2, SIR2L, SIR2L2, SIRT2, SIRT2-Specific

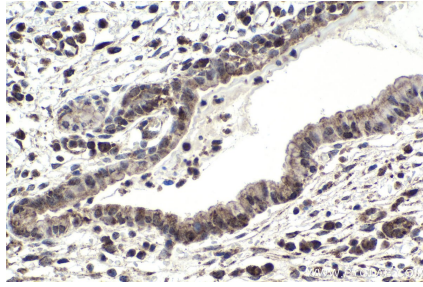
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
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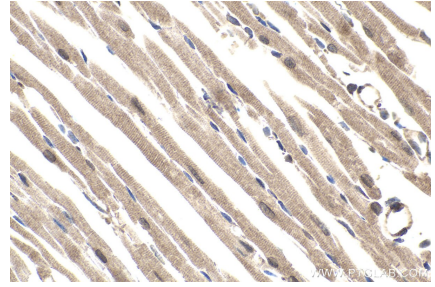
## Selected Validation Data



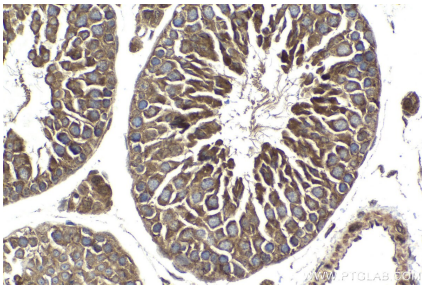
Immunohistochemical analysis of paraffin-embedded human ovary tumor tissue slide using KHC1821 (SIRT2 IHC Kit).



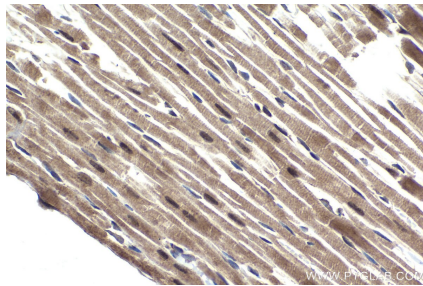
Immunohistochemical analysis of paraffin-embedded human cervical cancer tissue slide using KHC1821 (SIRT2 IHC Kit).



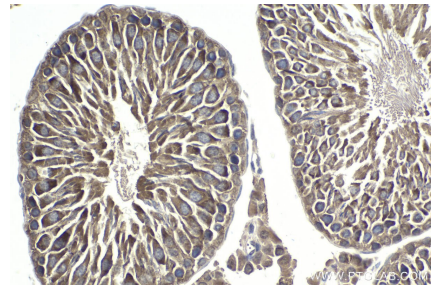
Immunohistochemical analysis of paraffin-embedded mouse heart tissue slide using KHC1821 (SIRT2 IHC Kit).



Immunohistochemical analysis of paraffin-embedded mouse testis tissue slide using KHC1821 (SIRT2 IHC Kit).



Immunohistochemical analysis of paraffin-embedded rat heart tissue slide using KHC1821 (SIRT2 IHC Kit).



Immunohistochemical analysis of paraffin-embedded rat testis tissue slide using KHC1821 (SIRT2 IHC Kit).