

**SirT6 (D8D12) Rabbit mAb**

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC	H M R Mk	Endogenous	42, 36	Rabbit IgG	#P59941	50721

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)

**Dilution**

1:1000  
1:200  
1:50 - 1:100

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #40431.

**Specificity/Sensitivity**

SirT6 (D8D12) Rabbit mAb recognizes endogenous levels of total SirT6 protein. This antibody does not cross-react with other sirtuin proteins.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to full-length mouse SirT6 protein.

**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 this family is *Saccharomyces cerevisiae* Sir2, which is involved in silencing of mating type loci, telomere maintenance, DNA damage response, and cell aging (1). SirT6, a mammalian homolog of Sir2, is a nuclear, chromatin-associated protein that promotes the normal maintenance of genome integrity mediated by the base excision repair (BER) pathway (2-4). The BER pathway repairs single-stranded DNA lesions that arise spontaneously from endogenous alkylation, oxidation, and deamination events. SirT6 deficient mice show increased sensitivity to DNA-damaging agents, including the alkylating agents MMS and H<sub>2</sub>O<sub>2</sub> (2). In addition, these mice show genome instability with increased frequency of fragmented chromosomes, detached centromeres, and gaps (2). SirT6 may regulate the BER pathway by deacetylating DNA Polβ or other core components of the pathway (2).

**Background References**

- Guarente, L. (1999) *Nat Genet* 23, 281-5.
- Mostoslavsky, R. et al. (2006) *Cell* 124, 315-29.
- Liszt, G. et al. (2005) *J Biol Chem* 280, 21313-20.
- Michishita, E. et al. (2005) *Mol Biol Cell* 16, 4623-35.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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