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SirT6 (D10A4) Rabbit mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 42	Source/Isotype: Rabbit IgG	UniProt ID: #Q8N6T7	Entrez-Gene Id: 51548
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:200

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.

Specificity/Sensitivity

SirT6 (D10A4) Rabbit mAb recognizes endogenous levels of total SirT6 protein. This antibody does not cross-react with other sirtuin proteins. This antibody detects a non-specific protein at 70 kDa of unknown origin.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to the carboxy terminus of human 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 H₂O₂ (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

Cross-Reactivity Key

H: Human

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