

SirT6 (D8D12) Rabbit mAb

✓ 100 µl
 (10 western blots)



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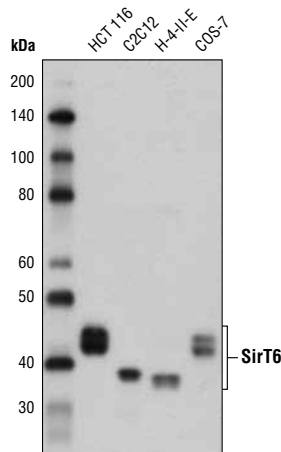
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Applications W, IP, IF-IC Endogenous	Species Cross-Reactivity* H, M, R, Mk	Molecular Wt. 42, 36 kDa	Isotype Rabbit IgG**
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Background: The Silent Information Regulator (Sir2) family of genes is a highly 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).

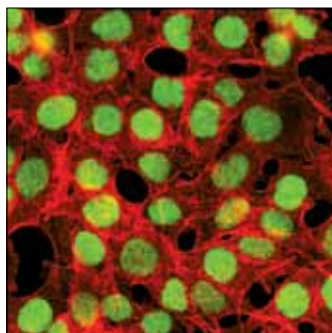
Specificity/Sensitivity: SirT6 (D8D12) Rabbit mAb recognizes endogenous levels of total SirT6 protein. This antibody does not cross-react with other sirtuin proteins.

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

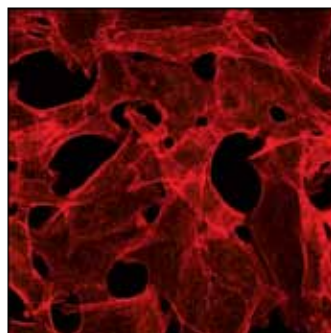


Western blot analysis of extracts from various cell lines using SirT6 (D8D12) Rabbit mAb.

HCT 116/shNT



HCT 116/shSirT6



Confocal immunofluorescent analysis of HCT 116 cells, expressing either non-targeting shRNA (shNT) (left) or shSirT6 (right), using SirT6 (D8D12) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red).

Entrez-Gene ID #51548
 UniProt ID #Q8N6T7

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.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:200
Immunofluorescence (IF-IC)	1:50

For product specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended companion products.

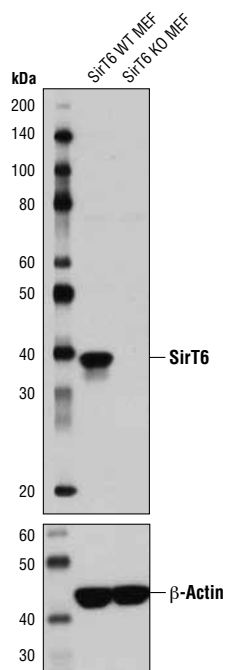
Background References:

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

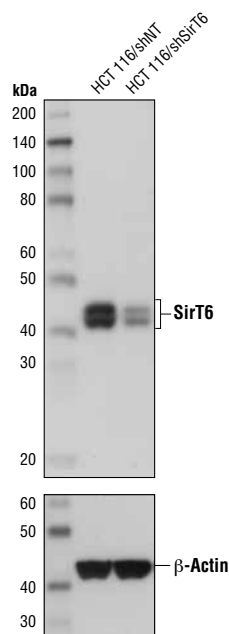
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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 Tween is a registered trademark of ICI Americas, Inc.

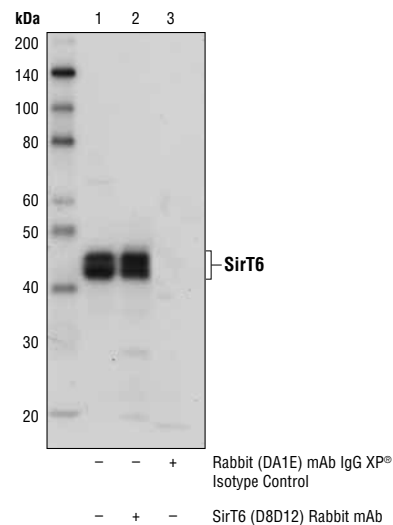
Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Western blot analysis of extracts from SirT6 wild-type (WT) and knockout (KO) mouse embryonic fibroblasts (MEF) using SirT6 (D8D12) Rabbit mAb (upper) or β -Actin (D6A8) Rabbit mAb #8457 (lower). SirT6 WT and KO MEF were kindly provided by Dr. David Lombard, University of Michigan.



Western blot analysis of extracts from HCT 116 cells, expressing either non-targeting shRNA (shNT) or shSirT6, using SirT6 (D8D12) Rabbit mAb (upper) or β -Actin (D6A8) Rabbit mAb #8457 (lower).



Immunoprecipitation of SirT6 from HCT 116 cell extracts using Rabbit (DA1E) mAb IgG XP[®] Isotype Control #3900 (lane 3) or SirT6 (D8D12) Rabbit mAb (lane 2). Lane 1 is 10% input. Western blot analysis was performed using SirT6 (D8D12) Rabbit mAb.