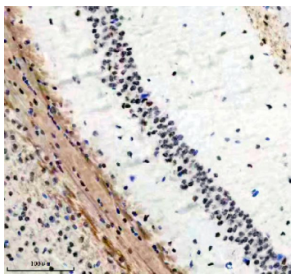
# Phospho-SIRT1 (pSer47) Antibody / DNA Damage Response Marker [clone FDA-19] (FY13408)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY13408 | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA | 100 ul |

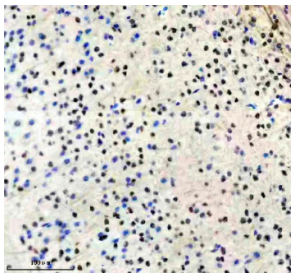
Recombinant RABBIT MONOCLONAL

**Bulk quote request**

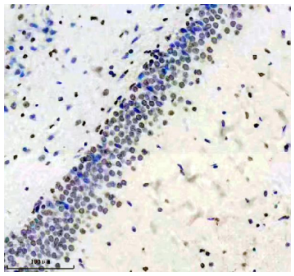
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|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Liquid |
| **Host** | Rabbit |
| **Clonality** | Recombinant Rabbit Monoclonal |
| **Isotype** | Rabbit IgG |
| **Clone Name** | FDA-19 |
| **Purity** | Affinity chromatography |
| **Buffer** | Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA. |
| **UniProt** | Q96EB6 |
| **Localization** | Nuclear, cytoplasmic |
| **Applications** | Western Blot: 1:500-1:2000<br>Immunohistochemistry: 1:50-1:200 |
| **Limitations** | This Phospho-SIRT1 (pSer47) Antibody / DNA Damage Response Marker is available for research use only. |



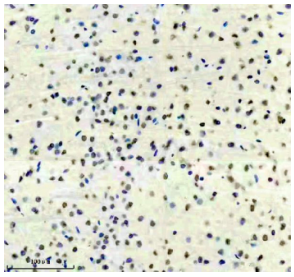
Phospho-SIRT1 (pSer47) Antibody Mouse Brain IHC. Immunohistochemical staining of FFPE mouse brain tissue with Phospho-Sirtuin 1 (pSer47) antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



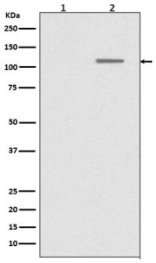
Phospho-SIRT1 (pSer47) Antibody Mouse Brain Immunohistochemistry. IHC staining of FFPE mouse brain tissue with Phospho-Sirtuin 1 (pSer47) antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Phospho-SIRT1 (pSer47) Antibody Rat Brain IHC. Immunohistochemical staining of FFPE rat brain tissue with Phospho-Sirtuin 1 (pSer47) antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Phospho-SIRT1 (pSer47) Antibody Rat Brain Immunohistochemistry. IHC staining of FFPE rat brain tissue with Phospho-Sirtuin 1 (pSer47) antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.




Phospho-SIRT1 (pSer47) Antibody HEK293 WB. Western blot analysis of phospho-SIRT1 expression in Lane 1: HEK293 cell lysate and Lane 2: lambda phosphatase-treated HEK293 cell lysate using Phospho-SIRT1 (pSer47) Antibody / DNA Damage Response Marker. A phospho-specific band is detected at approximately 110-120 kDa corresponding to phosphorylated Sirtuin 1 / SIRT1 at Ser47. Reduction of signal following phosphatase treatment supports phosphorylation-dependent recognition of SIRT1 associated with stress-response and DNA damage signaling pathways.

## Description

Sirtuin 1 (SIRT1) is a NAD-dependent deacetylase involved in regulation of chromatin organization, metabolic adaptation, oxidative stress signaling, and cellular survival pathways. Phospho-SIRT1 (pSer47) Antibody / DNA Damage Response Marker is useful for studying phosphorylation-dependent regulation of SIRT1 signaling during DNA damage and cellular stress responses. Phospho-SIRT1 antibody, also referred to as Phospho-Sirtuin 1 antibody and pSIRT1 Ser47 antibody in the literature, recognizes SIRT1 phosphorylated at serine 47, a post-translational modification associated with signaling pathways regulating stress adaptation and genomic stability.

SIRT1 is primarily localized within the nucleus where it modulates acetylation of histones and transcriptional regulators including p53, FOXO proteins, NF-kappaB, and DNA repair-associated signaling molecules. Phosphorylation-dependent regulation of SIRT1 influences enzymatic activity, protein interactions, chromatin accessibility, and transcriptional responses to oxidative and genotoxic stress. The Ser47 phosphorylation site has been linked to pathways involved in DNA damage signaling, stress-response regulation, and adaptive transcriptional control mechanisms.

Because SIRT1 contributes to maintenance of genomic stability and cellular survival under stress conditions, phosphorylation-specific regulation of SIRT1 has become increasingly important in cancer biology, aging research, and studies of stress-response signaling. Altered SIRT1 phosphorylation may affect DNA repair capacity, apoptotic signaling,

inflammatory responses, and resistance to oxidative damage. These pathways are highly relevant to tumor progression, neurodegenerative disease, metabolic dysfunction, and chronic inflammatory disorders associated with impaired stress adaptation mechanisms.

Phosphorylation-specific antibodies targeting SIRT1 are useful tools for distinguishing activated signaling states from total SIRT1 expression. A recombinant rabbit monoclonal clone FDA-19 antibody can be used for studies examining phosphorylation-dependent regulation of chromatin signaling and DNA damage response pathways. Because post-translational modification of SIRT1 influences multiple interconnected signaling networks associated with cellular stress adaptation, this target remains highly relevant for studies focused on genomic stability, metabolic regulation, and signal-dependent epigenetic control mechanisms.

Researchers studying metabolic signaling, stress-response pathways, and acetylation-dependent transcriptional regulation may also be interested in our broader Signal Transduction Antibodies collection featuring targets involved in chromatin signaling, cellular adaptation, and energy-responsive regulatory mechanisms.

## Application Notes

Optimal dilution of the Phospho-SIRT1 (pSer47) Antibody / DNA Damage Response Marker should be determined by the researcher.

## Immunogen

A synthesized peptide derived from human Sirtuin 1 (pSer47) was used as the immunogen for the Phospho-Sirtuin 1 (pSer47) antibody.

## Storage

Store the Phospho-Sirtuin 1 (pSer47) antibody at -20oC.

## Alternate Names

Phospho-SIRT1 pSer47 antibody, Phospho-Sirtuin 1 antibody, pSIRT1 Ser47 antibody, DNA damage signaling antibody, SIRT1 phosphorylation antibody


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