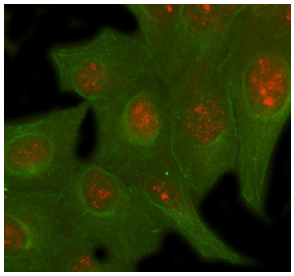
SIRT6 Antibody / Sirtuin 6 (FY13069)

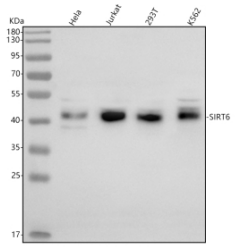
Catalog No.	Formulation	Size
FY13069	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

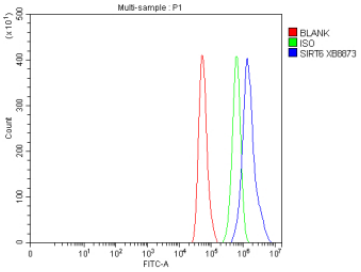
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q8N6T7
Localization	Nuclear, ER (minor)
Applications	ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence : 5ug/ml Immunocytochemistry : 5ug/ml Western Blot : 0.25-0.5ug/ml
Limitations	This SIRT6 antibody is available for research use only.



Immunofluorescent staining of SIRT6 using anti-SIRT6 antibody (red) and anti-Beta Tubulin antibody (green). SIRT6 was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-SIRT6 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG and DyLight 488 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of SIRT6 using anti-SIRT6 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human K562 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SIRT6 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A prominent band is detected at approximately 42 kDa, consistent with the reported migration of SIRT6, which typically runs above its predicted 36-39 kDa size. The apparent doublet pattern reflects the coexistence of two SIRT6 isoforms and/or post-translationally modified species such as phosphorylated or acetylated forms. Minor bands slightly above or below this range are occasionally observed and correspond to differentially modified or partially processed variants of SIRT6 described in the literature.



Flow Cytometry analysis of Hela cells using anti-SIRT6 antibody. Overlay histogram showing Hela cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SIRT6 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Description

SIRT6 antibody detects Sirtuin 6, a nuclear NAD+-dependent deacetylase that regulates genomic stability, metabolism, and lifespan. The UniProt recommended name is NAD-dependent protein deacylase sirtuin 6 (SIRT6). This enzyme belongs to the sirtuin family of class III histone deacetylases, which use NAD+ as a cofactor to remove acyl groups from lysine residues on histone and non-histone proteins.

Functionally, SIRT6 antibody recognizes a chromatin-associated protein that deacetylates histone H3 at lysine 9 and lysine 56, maintaining telomere integrity and DNA repair efficiency. SIRT6 also promotes base excision repair and regulates transcription by modulating chromatin compaction. It interacts with PARP1 and SNF2H to coordinate double-strand break repair and suppress genomic instability. Beyond chromatin regulation, SIRT6 controls glucose and lipid metabolism by repressing glycolytic gene expression and enhancing mitochondrial respiration.

The SIRT6 gene, located on chromosome 19p13.3, encodes a 355-amino-acid enzyme localized predominantly in the nucleus. SIRT6 expression is enriched in metabolically active tissues such as heart, liver, and brain. It modulates aging-related pathways by influencing insulin sensitivity, inflammation, and DNA repair. Deficiency of SIRT6 in mice causes premature aging, metabolic dysregulation, and shortened lifespan.

Pathologically, dysregulated SIRT6 activity has been implicated in cancer, diabetes, cardiovascular disease, and neurodegeneration. In cancer, SIRT6 may act as a tumor suppressor by limiting glycolysis and maintaining genomic integrity. In metabolic disorders, altered SIRT6 function disrupts energy homeostasis and inflammatory signaling. Research using SIRT6 antibody supports studies of chromatin remodeling, aging, and metabolic control.

SIRT6 antibody is validated for use in its applications, and it is widely applied in DNA repair and transcriptional regulation studies. NSJ Bioreagents supplies SIRT6 antibody reagents optimized for accurate detection of nuclear sirtuin activity and longevity-related mechanisms.

Structurally, SIRT6 contains a conserved Rossmann-fold domain responsible for NAD+ binding and a zinc-binding

module stabilizing its catalytic core. The enzyme exhibits both deacetylase and long-chain deacylase activity, extending its regulatory range to lipid-modified substrates. This antibody aids in investigating SIRT6Ã¯Â¿Â½s central role in chromatin biology and metabolic regulation.

Application Notes

Optimal dilution of the SIRT6 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SIRT6 recombinant protein (Position: D14-S355) was used as the immunogen for the SIRT6 antibody.

Storage

After reconstitution, the SIRT6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.