SIRT1 Monoclonal Antibody

catalog number: AN200054P

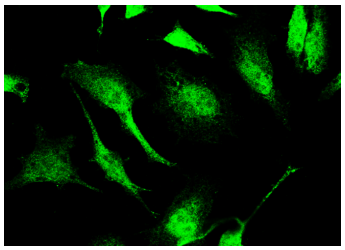
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

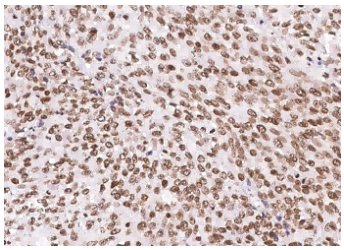
Reactivity	Human
Immunogen	Recombinant Human SIRT1 protein
Host	Mouse
Isotype	IgG1
Clone	12F12
Purification	Protein A
Buffer	0.2 μm filtered solution in PBS

Applications	Recommended Dilution
IHC-P	1:500-1:2000
ICC/IF	1:20-1:100

Data



Immunofluorescence analysis of SIRT1 in Hela cells. Cells were fixed with 4% PFA, permeabilzed with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with mouse anti-Human SIRT1 Monoclonal Antibody (1:60) at 4℃ overnight. Then cells were stained with the Alexa Fluor® 488-conjugated Goat Anti-mouse IgG secondary antibody(green).



Immunohistochemistry of paraffin-embedded human lung cancer using SIRT1 Monoclonal Antibody at dilution ofy 1:1000.

Preparation & Storage

Storage	This antibody can be stored at 2℃-8℃ for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20℃ to -80℃. Preservative-Free. Avoid repeated freeze-thaw cycles.
Shipping	Ice bag

Background

Toll-free: 1-888-852-8623
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SIRT1 (SIR2-like protein 1; also NAD-dependent protein deacetylase sirtuin-1 and hSIR2) is a class I member of the sirtuin family of enzymes. Although its predicted MW is 81 kDa, it runs anomalously at 110-120 kDa in SDS-PAGE. It is a widely expressed nuclear protein that participates in the deacetylation of multiple proteins, including p300, p53, LKB1 and histone H1. Functionally, this has the effect of promoting heterochromatin formation, cell survival and resistance to oxidative stress. Metabolically, SIRT1 induces insulin secretion, inhibits glycolysis and suppresses fatty acid synthesis. Human SIRT1 is 747 amino acids (aa) in length. It possesses two NLS's (aa 32-39 and 223-230), an NES (aa 138-145), and a sertuin-type deacetylase domain (aa 241-495) that contains an NAD and Zn binding motif. There are at least 12 utilized Ser/Thr phosphorylation sites, plus two nitrosylated Cys and one acetylated Ala. There are also four potential isoform variants. One is 95 kDa in size and shows a deletion of aa 454-639, a second is 17 kDa in size and contains a 16 aa substitution for aa 149-747, and a third contains an alternative start site at Met296. SIRT1 is also known to undergo proteolysis by cathepsin B at Val533Ser534, generating a fourth, C-terminally truncated 75 kDa isoform. Full-length SIRT1 is suggested to form trimers, while the 17 kDa isoform appears to form dimers. Over aa 2-747, human and mouse SIRT1 share 86% aa sequence identity.

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