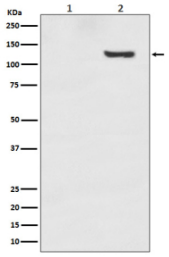
Phospho-SIRT1 (pThr530) Antibody / Stress Signaling Regulator [clone HAI-19] (FY13407)

Catalog No.	Formulation	Size
FY13407	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

Availability	1-2 days
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	HAI-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
Limitations	This Phospho-SIRT1 (pThr530) Antibody / Stress Signaling Regulator is available for research use only.



Phospho-SIRT1 (pThr530) Antibody 293T WB. Western blot analysis of phospho-SIRT1 expression in Lane 1: untreated 293T cell lysate and Lane 2: Calyculin A-treated 293T cell lysate using Phospho-SIRT1 (pThr530) Antibody / Stress Signaling Regulator. A phospho-specific band is detected at approximately 120 kDa in treated cells, consistent with phosphorylated Sirtuin 1 / SIRT1 at Thr530. Signal enrichment following phosphatase inhibition with Calyculin A supports phosphorylation-dependent regulation of SIRT1 signaling pathways associated with metabolic stress adaptation and cellular stress-response signaling.

Description

Sirtuin 1 (SIRT1) is a NAD-dependent protein deacetylase involved in regulation of metabolic adaptation, chromatin signaling, oxidative stress responses, and cellular survival pathways. Phospho-SIRT1 (pThr530) Antibody / Stress Signaling Regulator is useful for studying phosphorylation-dependent regulation of SIRT1 activity during cellular stress and signal transduction events. Phospho-SIRT1 antibody, also referred to as Phospho-Sirtuin 1 antibody and pSIRT1 Thr530 antibody in the literature, recognizes SIRT1 phosphorylated at threonine 530, a modification associated with regulation of stress-response and metabolic signaling pathways.

SIRT1 is predominantly localized within the nucleus where it regulates acetylation-dependent transcriptional programs involving p53, FOXO transcription factors, NF-kappaB, PGC1-alpha, and chromatin-associated proteins. Phosphorylation of SIRT1 contributes to modulation of protein stability, enzymatic activity, intracellular localization, and signaling interactions associated with cellular adaptation to metabolic and oxidative stress conditions. The Thr530 phosphorylation site has been implicated in pathways regulating stress-response signaling, transcriptional control, and adaptive cellular survival mechanisms.

Because SIRT1 signaling is closely linked to aging biology, tumor metabolism, and stress adaptation, phosphorylation-dependent regulation of SIRT1 has become increasingly important in studies examining metabolic disease, cancer progression, and inflammatory signaling. Altered SIRT1 phosphorylation may influence mitochondrial function, apoptosis, chromatin accessibility, and cellular resistance to oxidative damage. These signaling pathways are relevant to cancer biology, neurodegenerative disease, metabolic syndrome, and energy-responsive regulatory networks.

Phosphorylation-specific antibodies targeting SIRT1 are valuable tools for distinguishing activated signaling states from total protein expression. A recombinant rabbit monoclonal clone HAI-19 antibody can be used for studies examining phosphorylation-dependent regulation of SIRT1 signaling pathways and metabolic stress adaptation mechanisms. Because phosphorylation of SIRT1 contributes to dynamic regulation of chromatin signaling and cellular stress responses, this target remains highly relevant for studies investigating metabolic adaptation, transcriptional regulation, and signal-dependent post-translational modification pathways.

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 (pThr530) Antibody / Stress Signaling Regulator should be determined by the researcher.

Immunogen

A synthesized peptide derived from human SIRT1 (pThr530) was used as the immunogen for the Phospho-SIRT1 (pThr530) antibody.

Storage

Store the Phospho-SIRT1 (pThr530) antibody at -20oC.

Alternate Names

Phospho-SIRT1 pThr530 antibody, Phospho-Sirtuin 1 antibody, pSIRT1 Thr530 antibody, Stress signaling phosphoprotein antibody, SIRT1 phosphorylation antibody