Order online now!

www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 600-401-GW4

SIRT1 Antibody

Overview

Description:	Anti-SIRT1 (RABBIT) Antibody - 600-401-GW4
Item No.:	600-401-GW4
Size:	100 µg
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	SIRT1 antibody detects human SIRT1 protein. SIRT1 is a member of the sirtuin family of protein-modifying enzymes. SIRT1 is a NAD+-dependent deacetylase that plays an important role in many cellular processes. SIRT1 protein is known to regulate epigenetic gene silencing and suppress recombination of rDNA. SIRT1 deacetylates a wide range of substrates, including p53, NF-kB, FOXO transcription factors, and PGC-1 alpha, with roles in cellular processes such as muscle differentiation, adipogenesis, protection from axonal degeneration, and life span extension. SIRT1 is downregulated in cells that have high insulin resistance and inducing its expression increases insulin sensitivity, suggesting the molecule is associated with improving insulin sensitivity. Furthermore, SIRT1 de-acetylates and affects the activity of both members of the PGC1-alpha/ERR-alpha complex, which are essential metabolic regulatory transcription factors. Anti-SIRT1 Antibody is significant for researchers involved in research areas including cancer, diabetes, aging, neurodegenerative, metabolic and cardiovascular diseases.
Synonyms:	rabbit anti-SIRT1 antibody, NAD-dependent protein deacetylase sirtuin-1, hSIRT1, Regulatory protein SIR2 homolog 1, SIR2-like protein 1, hSIR2, SirtT1 75 kDa fragment, 75SirT1, SIRT-1, SIRT 1, SIR2L1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	SIRT1

Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	Affinity purified Anti-SIRT1 antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide near the c-terminal of human SIRT1 protein.
Purity/Specificity:	Anti-SIRT1 is directed against human SIRT1. This product is an affinity purified antibody produced by immunoaffinity chromatography. A BLAST analysis used to suggest reactivity with this protein from human, mouse, rat based on 100% homology for the immunizing sequence.
Relevant Links:	• UniProtKB - Q96EB6 • NCBI - NP_001135970.1 • GeneID - 23411

Application Details

Tested Applications:	ELISA, WB
Application Note:	This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band ~62 or 81.7 kDa in size corresponding to SIRT1 by western blotting in the appropriate cell lysate or extract. Higher observed band ~125 kda is due to complexing proteins.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	5.0 ug/ml
WB:	1.0 ug/ml

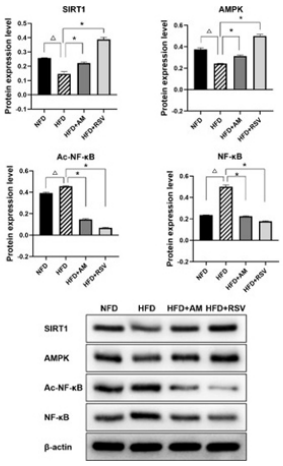
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.07 mg/ml by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

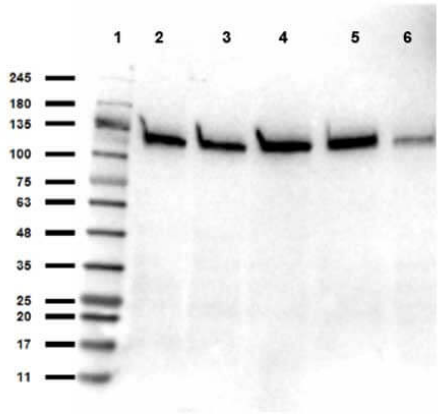
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
AM activation of the SIRT1/NF-κB pathway reduces inflammation in adipose tissue of rats subjected to HFD induced insulin resistance. Here are the protein expression levels for SIRT1 and NF-κB in adipose tissues of insulin-resistant rats induced by high-fat diets. Statistically significant differences with NFD groups were at $\Delta p < 0.05$, and significant differences with HFD groups were at $*p < 0.05$. (NFD:Diet with normal fat, HFD:Fat-rich diet, RSV:resveratrol, AM:abdominal massage). Fig 4.
PMID: 35907080



Western Blot
Western Blot of Rabbit anti-SIRT1 antibody. Lane 1: MW ladder (opal pre-stained) p/n (MB-210-0500). Lane 2: HCT-116 WCL (p/n W09-001-GM4). Lane 3: K-562 WCL (p/n W09-001-GJ7). Lane 4: Jurkat WCL (p/n W09-001-370). Lane 5: A549 WCL (p/n W09-001-372). Lane 6: LnCap WCL (p/n W09 -001-GJ9). Load: 35 µg per lane. Primary antibody: SIRT1 Antibody at 1:1000 for overnight at 4°C. Secondary antibody: rabbit secondary HRP antibody (p/n 611-103-122) at 1:70,000 for 45 min at RT. Block: BlockOut (p/n MB-073) overnight at 4°C. Predicted size: 82 kDa, 61 kDa for SIRT1. Observed size: ~110 kDa due to complexing proteins.

References

- Gao T et al. Ameliorating Inflammation in Insulin-resistant Rat Adipose Tissue with Abdominal Massage Regulates SIRT1/NF-κB Signaling. *Cell Biochem Biophys.* (2022)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.