BOSTER BIOLOGICAL TECHNOLOGY
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Anti-SIRT1 Antibody Picoband®

Catalog Number: A00018-1

About SIRT1

Sirtuin 1, also known as SIR2L1 or SIRT1, is a protein that in humans is encoded by the SIRT1 gene. It is mapped to 10q21.3. Sirtuin 1 is a member of the sirtuin family of proteins, homologs of the Sir2 gene in S. cerevisiae. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. Sirtuin 1 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, Sirtuin 1 was shown to de-acetylate and affect the activity of both members of the PGC1-alpha/ERR-alpha complex, which are essential metabolic regulatory transcription factors.

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Overview

Product Name	Anti-SIRT1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-SIRT1 Antibody Picoband® catalog # A00018-1. Tested in ELISA, IF, ICC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q96EB6

Technical Details

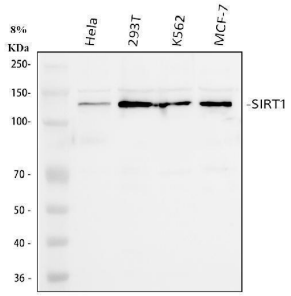
Immunogen	E.coli-derived human SIRT1 recombinant protein (Position: Y142-H533).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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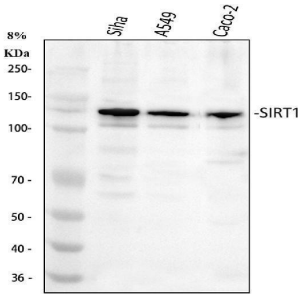
	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5u;g/ml, Human Immunocytochemistry/Immunofluorescence, 5ug/ml, Human ELISA, 0.1-0.5ug/ml, -

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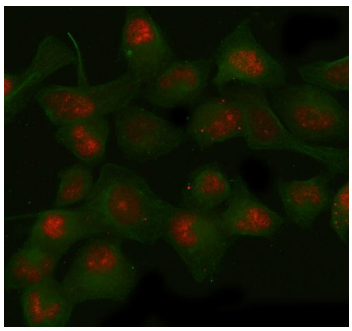
Anti-SIRT1 Antibody Picoband® (A00018-1) Images



Western blot analysis of SIRT1 using anti-SIRT1 antibody (A00018-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human MCF-7 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-SIRT1 antigen affinity purified polyclonal antibody (Catalog # A00018-1) at 0.25 ug/mL overnight at 4°C, 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 is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for SIRT1 at approximately 120 kDa. The expected band size for SIRT1 is at 82 kDa.



Western blot analysis of SIRT1 using anti-SIRT1 antibody (A00018-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SiHa whole cell lysates, Lane 2: human A549 whole cell lysates, Lane 3: human CACO-2 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-SIRT1 antigen affinity purified polyclonal antibody (Catalog # A00018-1) at 0.25 ug/mL overnight at 4°C, 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 is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for SIRT1 at approximately 120 kDa. The expected band size for SIRT1 is at 82 kDa.



IF analysis of SIRT1 using anti-SIRT1 antibody (A00018-1) and anti-Beta Tubulin antibody (M01857-3). SIRT1 was detected in immunocytochemical section of Hela cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-SIRT1 Antibody (A00018-1) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) and DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) were used as

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secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

3 Publications Citing This Product

1. PubMed ID: 10.1007/s11596-017-1698-8, Dietary restriction reduces blood lipids and ameliorates liver function of mice with hyperlipidemia

2. PubMed ID: 10.1080/14767058.2017.1311310, Resveratrol suppresses hyperoxia-induced nucleocytoplasmic shuttling of SIRT1 and ROS production in PBMC from preterm infants in vitro

3. PubMed ID: 23123425, Ying Hz, Liu Yh, Yu B, Wang Zy, Zang Jn, Yu Ch. Food Chem Toxicol. 2013 Feb;52:53-60. Doi: 10.1016/J.Fct.2012.10.030. Epub 2012 Nov 2. Dietary Quercetin Ameliorates Nonalcoholic Steatohepatitis Induced By A High-Fat Diet In Gerbils.

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