

Anti-SIRT1 Polyclonal Antibody 2

Product Details

Ig Type:	IgG
Reactivity:	Human, Mouse (predicted: Dog, Pig, Horse, Rabbit)
Molecular Weight:	Theoretical: 81 kDa. Actual: 120 kDa.
Purification:	Protein A purified

Applications

1. Tissue/cell: human glioma tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH6.0), Boiling bathing for 15 min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30 min; Blocking buffer (normal goat serum) at 37°C for 20 min; Incubation: Anti-SIRT1/sirtuin 1 Polyclonal Antibody, Unconjugated (TMAB-01691) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody and DAb staining.

2. Sample:

Lane 1: Hela (Human) Cell Lysate at 30 µg

Lane 2: NIH/3T3 (Mouse) Cell Lysate at 30 µg

Lane 3: HepG2 (Human) Cell Lysate at 30 µg

Lane 4: 293T (Human) Cell Lysate at 30 µg

Lane 5: Testis (Mouse) Lysate at 40 µg

Primary: Anti-SIRT1 (TMAB-01691) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 116/95 kDa

Observed band size: 116 kDa

3. Blank control: HL-60. Primary Antibody (green line): Rabbit Anti-SIRT1 antibody (TMAB-01691)

Dilution: 1 µg/10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG.

Secondary Antibody: Goat anti-rabbit IgG-AF488

Dilution: 1 µg/test.

Protocol

The cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 0.1% PBST for 20 min at room temperature. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.

4. Sample:

U937 (Human) Cell Lysate at 30 µg

HL-60 (Human) Cell Lysate at 30 µg

Primary: Anti-SIRT1 (TMAB-01691) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

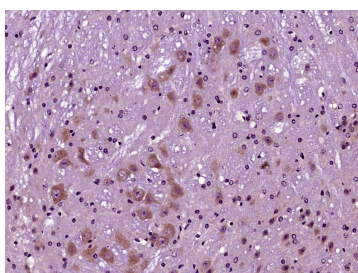
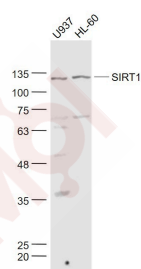
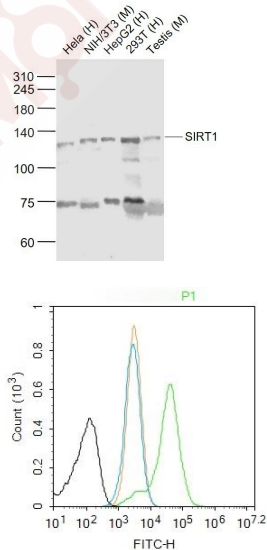
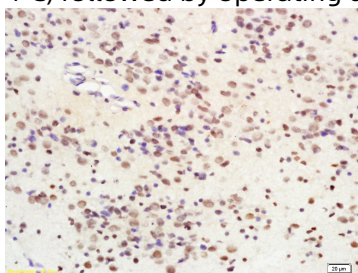
Predicted band size: 81 kDa

Observed band size: 120 kDa

5. Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody

Verified Activity:

incubation with (SIRT1) Polyclonal Antibody, Unconjugated (TMAB-01691) at 1:400 overnight at 4°C, followed by operating according to SP Kit (Rabbit) instructions and DAB staining.



Application: FCM,IF,IHC-Fr,IHC-P,WB

Recommended WB: 1:500-2000; IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500; FCM: 1ug/Test

Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

Antigen Details

Immunogen: KLH conjugated synthetic peptide: human SIRT1

Antigen Species: Human

Gene ID: 23411

Uniprot ID: Q96EB6

Synonyms: SIR2L1; sirtuin 1

Biology Area: p53 Pathway, Acetylation, Class III / Sir2 class, Obesity, Host Virus Interaction, Other Nuclear Bodies

Research Background

This gene encodes a member of the sirtuin family of proteins, homologs to the yeast Sir2 protein. Members of the sirtuin family are characterized by a sirtuin core domain and grouped into four classes. The functions of human sirtuins have not yet been determined; however, yeast sirtuin proteins are known to regulate epigenetic gene silencing and suppress recombination of rDNA. Studies suggest that the human sirtuins may function as intracellular regulatory proteins with mono-ADP-ribosyltransferase activity. The protein encoded by this gene is included in class I of the sirtuin family. Alternative splicing results in multiple transcript variants. Function : SirtT1 75 kDa fragment: catalytically inactive 75SirT1 may be involved in regulation of apoptosis. May be involved in protecting chondrocytes from apoptotic death by associating with cytochrome C and interfering with apoptosome assembly. Subunit : Found in a complex with PCAF and MYOD1. Component of the eNoSC complex, composed of SIRT1, SUV39H1 and RRP8. Interacts with HES1, HEY2 and PML. Interacts with RPS19BP1/AROS. Interacts with KIAA1967/DBC1 (via N-terminus); the interaction disrupts the interaction between SIRT1 and p53/TP53. Interacts with SETD7; the interaction induces the dissociation of SIRT1 from p53/TP53 and increases p53/TP53 activity. Interacts with MYCN, NR112, CREBZF, TSC2, TLE1, FOS, JUN, NR0B2, PPARG, NCOR, IRS1, IRS2 and NMNAT1. Interacts with HNF1A; the interaction occurs under nutrient restriction. Interacts with SUZ12; the interaction mediates the association with the PRC4 histone methylation complex which is specific as an association with PCR2 and PCR3 complex variants is not found. Interacts with HIV-1 tat. Subcellular Location : Nucleus, PML body. Cytoplasm. Note=Recruited to the nuclear bodies via its interaction with PML. Colocalized with APEX1 in the nucleus. May be found in nucleolus, nuclear euchromatin, heterochromatin and inner membrane. Shuttles between nucleus and cytoplasm. SirtT1 75 kDa fragment: Cytoplasm. Mitochondrion. Tissue Specificity : Widely expressed. Post-translational modifications : Methylated on multiple lysine residues; methylation is enhanced after DNA damage and is dispensable for deacetylase activity toward p53/TP53. Phosphorylated. Phosphorylated by STK4/MST1, resulting in inhibition of SIRT1-mediated p53/TP53 deacetylation. Phosphorylation by MAPK8/JNK1 at Ser-27, Ser-47, and Thr-530 leads to increased nuclear localization and enzymatic activity. Phosphorylation at Thr-530 by DYRK1A and DYRK3 activates deacetylase activity and promotes cell survival. Phosphorylation by mammalian target of rapamycin complex 1 (mTORC1) at Ser-47 inhibits deacetylation activity. Phosphorylated by CaMK2, leading to increased p53/TP53 and NF-kappa-B p65/RELA deacetylation activity (By similarity). Phosphorylation at Ser-27 implicating MAPK9 is linked to protein stability. There is some ambiguity for some phosphosites: Ser-159/Ser-162 and Thr-544/Ser-545. Proteolytically cleaved by cathepsin B upon TNF-alpha treatment to yield catalytic inactive but stable SirtT1 75 kDa fragment (75SirT1). S-nitrosylated by GAPDH, leading to inhibit the NAD-dependent protein deacetylase activity (By similarity). Similarity : Belongs to the sirtuin family. Contains 1 deacetylase sirtuin-type domain.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481