Anti-Spermine synthase Antibody [JE61-85]

HA720065

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	41 kDa
Clone number:	JE61-85

Description: This gene encodes a protein belonging to the spermidine/spermin synthase family and catalyzes the production of spermine from spermidine. Pseudogenes of this gene are located on chromosomes 1, 5, 6 and X. Mutations in this gene cause an X-linked intellectual disability called Snyder-Robinson Syndrome (SRS). Multiple transcript variants encoding different isoforms have been found for this gene. Spermine synthase is an enzyme that converts spermidine into spermine. This enzyme catalyses the following chemical reaction. Spermine synthase is a form of polyamine that is in all eukaryotes and plays a role in a variety of biological functions in plants. Its structure consists of two identical monomers of 41 kDa with three domains each, creating a homodimer formed via dimerization. The interactions between one of the three domains, the N-terminals of the monomers, is responsible for dimerization as that is where the active site is located; the central terminal consisting of four β- strands structurally forming a lid for the third domain, the C-terminal domain.

Immunogen: Synthetic peptide within human Spermine synthase aa 100-150/366.

Positive control: Hela cell lysate, Jurkat cell lysate, K562 cell lysate, rat uterus tissue lysate, mouse testis tissue lysate, human placenta tissue, human prostate tissue, Hela.

Subcellular location: Cytosol, extracellular exosome.

Database links: SwissProt: P52788 Human | P97355 Mouse
Entrez Gene: 363469 Rat

Recommended Dilutions:

WB	1:500-1:2,000
IF-Cell	1:50
IHC-P	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

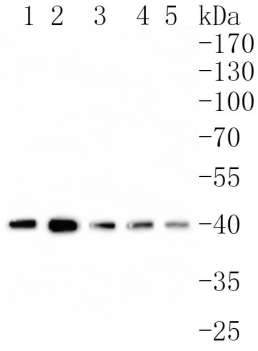

Fig1: Western blot analysis of Spermine synthase on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA720065, 1/500) was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.
Positive control:
Lane 1: Hela cell lysate
Lane 2: Jurkat cell lysate
Lane 3: K562 cell lysate
Lane 4: Rat uterus tissue lysate
Lane 5: Mouse testis tissue lysate

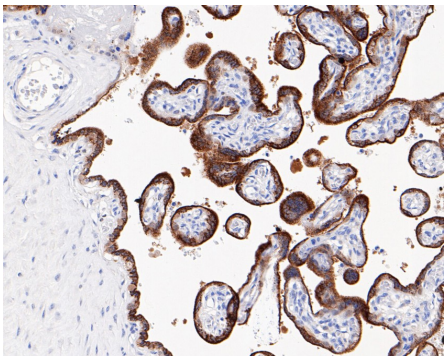

Fig2: Immunohistochemical analysis of paraffin-embedded human placenta tissue using anti-Spermine synthase antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA720065, 1/200) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

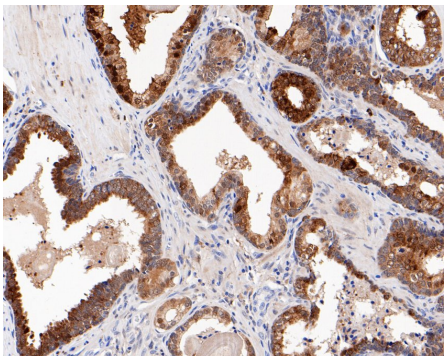

Fig3: Immunohistochemical analysis of paraffin-embedded human prostate tissue using anti-Spermine synthase antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA720065, 1/200) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

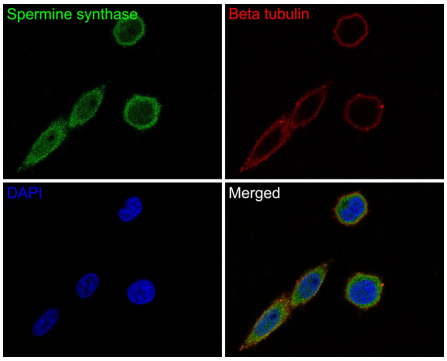

Fig4: Immunocytochemistry analysis of Hela cells labeling Spermine synthase with Rabbit anti-Spermine synthase antibody (HA720065) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 ℃, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-Spermine synthase antibody (HA720065) at 1/50 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) was used as the secondary antibody at 1/1,000 dilution. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/200 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (Alexa Fluor® 647) were used as the secondary antibody at 1/1,000 dilution.

Background References

1. Guo Y. et. al. Spermine synthase and MYC cooperate to maintain colorectal cancer cell survival by repressing Bim expression. Nat Commun. 2020 Jun
2. Timson DJ. Myosin Va and spermine synthase: partners in exosome transport. Biosci Rep. 2019 Apr