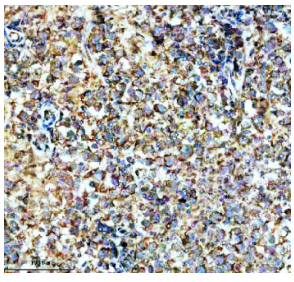
SPATA6 Antibody / Spermatogenesis-associated protein 6 (FY12435)

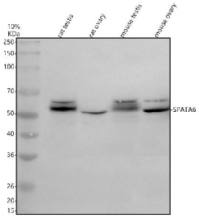
Catalog No.	Formulation	Size
FY12435	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9NWH7
Localization	Golgi apparatus, Vesicles
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SPATA6 antibody is available for research use only.



Immunohistochemical staining of SPATA6 using anti-SPATA6 antibody. SPATA6 was detected in a paraffin-embedded section of human testis cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SPATA6 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Western blot analysis of SPATA6 using anti-SPATA6 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat testis tissue lysates, Lane 2: rat ovary tissue lysates, Lane 3: mouse testis tissue lysates, Lane 4: mouse ovary tissue 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-SPATA6 antibody at 0.5 ug/ml overnight at 4oC, 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 was developed using an ECL Plus Western Blotting Substrate. SPATA6 (~52 kDa predicted) was detected as a doublet at ~50-55 kDa in rat and mouse testis, consistent with phosphorylated and unphosphorylated forms reported in germ cell studies.

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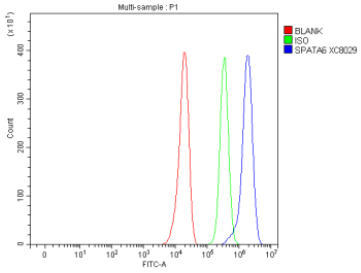

Flow Cytometry analysis of U251 cells using anti-SPATA6 antibody. Overlay histogram showing U251 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-SPATA6 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

The SPATA6 antibody targets Spermatogenesis-associated protein 6, a membrane-anchored protein encoded by the SPATA6 gene. Spermatogenesis-associated protein 6 plays a crucial role in sperm tail formation, flagellar assembly, and intercellular junction organization during spermatid maturation. It localizes primarily to the manchette and head-tail coupling apparatus, structures that facilitate shaping and attachment of the developing sperm tail. The SPATA6 antibody allows researchers to study sperm morphogenesis, ciliary structure, and reproductive cell differentiation.

Spermatogenesis-associated protein 6 contributes to the structural integrity of the connecting piece between the nucleus and flagellum, ensuring proper transmission of motility forces. The SPATA6 antibody supports visualization of this protein during spermiogenesis, revealing dynamic redistribution patterns correlated with microtubule organization. Loss of SPATA6 disrupts flagellar biogenesis and causes male infertility in model organisms, emphasizing its essential role in germ-cell architecture.

Beyond testicular expression, Spermatogenesis-associated protein 6 is detected in ciliated epithelial cells, suggesting broader participation in cilium assembly and anchoring. The SPATA6 antibody facilitates these studies and aids in understanding conserved mechanisms that govern axoneme formation and basal-body docking. Its structural role links it to cytoskeletal regulators and motor proteins such as dyneins and kinesins.

Mutations in the SPATA6 gene have been associated with asthenozoospermia, characterized by reduced sperm motility. The SPATA6 antibody enables quantification of protein expression in sperm samples and cell lines, providing valuable diagnostic and mechanistic insights. Additionally, SPATA6 participates in the assembly of intercellular junctions during

germ-cell development, influencing SertoliÃ¯Â¿Â½spermatid adhesion and polarity.

The SPATA6 antibody performs effectively in western blotting, immunohistochemistry, and immunofluorescence, typically showing localization to sperm tail and manchette regions. NSJ Bioreagents provides this antibody as a validated, high-specificity reagent for reproductive biology and cell-structure research. By enabling accurate detection of Spermatogenesis-associated protein 6, the SPATA6 antibody supports investigations into flagellar morphogenesis, ciliary function, and molecular mechanisms underlying male infertility.

Application Notes

Optimal dilution of the SPATA6 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SPATA6 recombinant protein (Position: R58-F488) was used as the immunogen for the SPATA6 antibody.

Storage

After reconstitution, the SPATA6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.