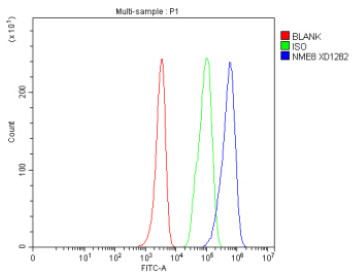
NME8 Antibody / TXNDC3 / Thioredoxin domain-containing protein 3 (FY13162)

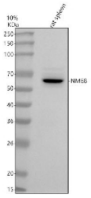
Catalog No.	Formulation	Size
FY13162	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, 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	Q8N427
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This NME8 antibody is available for research use only.



Flow Cytometry analysis of HEL cells using anti-NME8 antibody. Overlay histogram showing HEL cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NME8 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.



Western blot analysis of TXNDC3/NME8 using anti-NME8 antibody. Lane 1: rat spleen 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-NME8 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 enhanced chemiluminescent. A specific band was detected for TXNDC3/NME8 at approximately 67 kDa. The expected molecular weight of TXNDC3/NME8 is at 67 kDa.

Description

NME8 antibody detects Thioredoxin domain-containing protein 3, a microtubule-associated oxidoreductase that stabilizes axonemal structures in motile cilia. The UniProt recommended name is Thioredoxin domain-containing protein 3 (NME8). Also known as TXNDC3 or SPTRX2, this protein contains a thioredoxin-like domain and functions as part of the dynein regulatory complex involved in ciliary motility and organization.

Functionally, NME8 antibody identifies a 588-amino-acid protein localized to cilia and flagella, where it forms disulfide-linked complexes that maintain axonemal integrity. NME8 acts as a redox-active thioredoxin enzyme, regulating disulfide bond formation and stabilization of microtubule doublets. It is crucial for proper assembly of outer dynein arms, which generate the bending motion of motile cilia.

The NME8 gene is located on chromosome 7p14.1 and is expressed in ciliated tissues such as respiratory epithelium, oviduct, and testis. Through its thioredoxin activity, NME8 supports sperm motility, mucociliary clearance, and left-right body asymmetry during embryonic development.

Pathologically, mutations in NME8 cause primary ciliary dyskinesia (PCD), a disorder characterized by chronic respiratory infections, male infertility, and situs inversus due to impaired ciliary movement. Dysregulation of NME8 expression has also been implicated in neurodegenerative diseases such as AlzheimerÃ¯Â¿Â½s, where it may influence axonal transport and oxidative stress. Research using NME8 antibody supports studies in ciliary biology, redox regulation, and cytoskeletal organization.

NME8 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect ciliary structural and redox-regulating proteins. NSJ Bioreagents provides NME8 antibody reagents optimized for cell motility, developmental, and oxidative stress research.

Structurally, Thioredoxin domain-containing protein 3 contains an N-terminal thioredoxin fold and multiple coiled-coil regions that mediate protein dimerization and microtubule binding. This antibody enables detailed study of NME8's role in ciliary structure and redox homeostasis.

Application Notes

Optimal dilution of the NME8 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TXNDC3/NME8 recombinant protein (Position: M1-H446) was used as the immunogen for the NME8 antibody.

Storage

After reconstitution, the NME8 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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