

DNAAF5 Antibody / Dynein axonemal assembly factor 5 Antibody (FY13659)

Catalog No.	Formulation	Size
FY13659	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	Q86Y56
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml ELISA : 0.1-0.5 ug/ml
Limitations	This DNAAF5 Antibody / Dynein axonemal assembly factor 5 Antibody is provided for laboratory research use only.

DNAAF5 Antibody by IHC in human fallopian tube. Immunohistochemistry of a paraffin-embedded human fallopian tube section using DNAAF5 Antibody shows brown DAB staining in the epithelial lining of folded mucosal structures. Hematoxylin counterstains nuclei blue-purple, and staining varies across epithelial and stromal compartments. Heat-mediated antigen retrieval was performed in EDTA buffer (pH 8.0), followed by 10% goat serum blocking. Tissue was incubated overnight at 4°C with 2 ug/ml rabbit primary antibody and detected using a peroxidase-conjugated goat anti-rabbit IgG secondary antibody and DAB.

DNAAF5 Antibody by WB in human and rodent lysates. Western blot analysis using DNAAF5 Antibody on a 10% SDS-PAGE gel with 30 ug of reduced protein per lane. Lanes 1-7 contain SH-SY5Y, MCF-7, A549, rat thymus, rat lung, mouse thymus and mouse lung lysates, respectively. The principal immunoreactive bands migrate around 90-100 kDa in human samples and approximately 80-90 kDa in several rodent samples, near the predicted 94 kDa size of dynein axonemal assembly factor 5. Additional lower bands are visible in some rodent lanes; their identities are not established. Detection used HRP-conjugated secondary antibody and chemiluminescence.

Description

DNAAF5 Antibody / Dynein axonemal assembly factor 5 Antibody targets a protein required for the proper assembly of motile ciliary dynein machinery. DNAAF5 is also known as HEATR2, reflecting its HEAT-repeat-containing architecture. Motile cilia generate coordinated beating through axonemal dynein motors that convert ATP hydrolysis into sliding forces between microtubule doublets. Before these large motor complexes can operate within the axoneme, their constituent heavy, intermediate, and light chains must be folded and assembled correctly.

Dynein axonemal assembly factors act primarily during the cytoplasmic maturation of dynein complexes. DNAAF5 is part of this assembly network and contributes to the production of functional outer and inner dynein arms. HEAT-repeat proteins often provide extended surfaces for protein-protein interactions, a structural feature consistent with an organizing role during the maturation of multiprotein complexes. Loss of an assembly factor can impair several dynein arm types at once, even when the underlying axonemal microtubule scaffold remains recognizable. This distinction separates defects in motor assembly from defects in the formation of the ciliary structure itself.

Pathogenic variants in DNAAF5 are associated with primary ciliary dyskinesia, a disorder in which defective motile cilia compromise mucociliary clearance and other cilia-dependent processes. Impaired ciliary motility may also affect the establishment of left-right body asymmetry during development. These phenotypes demonstrate how a cytoplasmic assembly defect can have consequences in anatomically distinct ciliated tissues. NSJ Bioreagents offers this DNAAF5 Antibody to support investigations of axonemal dynein maturation and the molecular requirements for coordinated ciliary beating. Defining the protein interactions mediated by DNAAF5 may help explain why disruption of a single assembly factor produces broad defects in dynein arm formation.

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Application Notes

Investigators should determine the optimal dilution of the DNAAF5 Antibody / Dynein axonemal assembly factor 5 Antibody empirically for their experimental conditions.

Immunogen

The DNAAF5 Antibody was generated using e. coli-derived human HEATR2/DNAAF5 recombinant protein (amino acids L193-D807).

Storage

Store the reconstituted DNAAF5 Antibody at 4oC for up to one month. For long-term storage, divide into aliquots and keep at -20oC for up to six months. Avoid repeated freeze-thaw cycles.

Alternate Names

DNAAF5 antibody, Dynein axonemal assembly factor 5 antibody, HEAT repeat-containing protein 2 antibody, HEAT repeat containing 2 antibody, DNAAF5 rabbit polyclonal antibody

