

DNAL1 Antibody / Dynein axonemal light chain 1 Antibody (FY13653)

Catalog No.	Formulation	Size
FY13653	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	Q4LDG9
Applications	Western Blot : 0.5-1ug/ml ELISA : 0.1-0.5 ug/ml
Limitations	This DNAL1 Antibody / Dynein axonemal light chain 1 Antibody is provided for laboratory research use only.

DNAL1 Antibody by WB in 4 lysate samples. Western blot analysis using DNAL1 Antibody was performed with 30 ug of protein per lane under reducing conditions on a 12% SDS-PAGE gel. Lane assignments: 1, human SiHa whole-cell lysate; 2, human MCF-7 whole-cell lysate; 3, rat brain lysate; 4, mouse brain lysate. Following electrophoresis, proteins were transferred to nitrocellulose and blocked with 5% non-fat milk. The membrane was incubated with rabbit primary antibody at 0.5 ug/ml overnight at 4°C and HRP-conjugated goat anti-rabbit IgG secondary antibody (1:5000). ECL detection showed an immunoreactive band near 20 kDa, consistent with the approximately 22 kDa expected size of DNAL1.

Description

DNAL1 Antibody / Dynein axonemal light chain 1 Antibody targets a protein with important roles in cellular biology. Dynein axonemal light chain 1 (DNAL1) is a component associated with the dynein motor machinery of motile cilia and flagella. Axonemal dyneins convert the chemical energy of ATP hydrolysis into mechanical forces that drive microtubule sliding. Because dynein arms are arranged along the outer microtubule doublets of the axoneme, their coordinated activity generates the bending patterns required for effective ciliary movement.

Axonemal dynein complexes contain heavy chains responsible for motor activity together with intermediate and light

chains that contribute to assembly, stability and regulation. DNAL1 is associated with outer dynein arm function and has been investigated as part of the machinery needed for normal motility. A defect in an accessory subunit can impair the larger motor even if its ATPase-containing heavy chains are present. Understanding the contributions of individual subunits is therefore important for interpreting the architecture of the entire complex.

Motile cilia are essential in several physiological settings. Coordinated beating moves mucus and trapped particles through the respiratory tract, helps establish left-right asymmetry during embryonic development and supports reproductive functions. Disorders affecting axonemal dynein can consequently produce combinations of chronic airway disease, laterality abnormalities and fertility problems. DNAL1 has been examined in the broader context of these ciliary motor defects, although the consequences of particular genetic changes require variant-specific evidence.

NSJ Bioreagents offers this DNAL1 Antibody to help investigate the contribution of dynein axonemal light chain 1 to motor organization and ciliary function. Clarifying how DNAL1 associates with other dynein components may improve understanding of the structural requirements for coordinated axonemal movement.

Explore related research targets in our [Cell Biology Antibodies](#) collection.

Application Notes

The ideal working dilution for the DNAL1 Antibody / Dynein axonemal light chain 1 Antibody should be established by the investigator based on assay conditions.

Immunogen

The DNAL1 Antibody was generated using e. coli-derived human DNAL1 recombinant protein (amino acids M1-N190).

Storage

Store the reconstituted DNAL1 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

DNAL1 antibody, Dynein axonemal light chain 1 antibody, C14orf168 antibody, Dynein light chain 1 antibody, axonemal antibody, DNAL1 rabbit polyclonal antibody