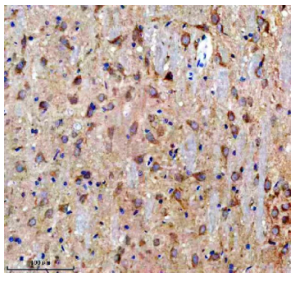
Doublecortin-like kinase 1 Antibody / DCLK1 (FY13437)

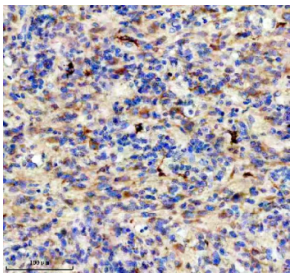
Catalog No.	Formulation	Size
FY13437	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

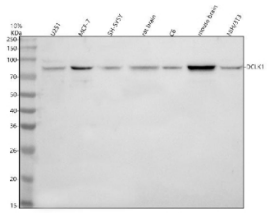
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
UniProt	O15075
Localization	Cytoplasm, Nucleus
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This Doublecortin-like kinase 1 antibody is available for research use only.



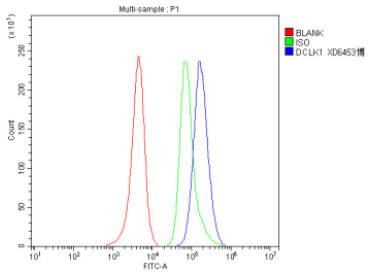
Immunohistochemistry analysis of Doublecortin-like kinase 1 using Doublecortin-like kinase 1 antibody. Doublecortin-like kinase 1 expression was examined in a paraffin-embedded section of rat brain tissue. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0). Tissue sections were blocked with normal goat serum and incubated with Doublecortin-like kinase 1 antibody overnight at 4Â°C. Immunoreactivity was detected using an HRP-based detection system with DAB chromogen, followed by hematoxylin counterstaining.



Immunohistochemistry analysis of Doublecortin-like kinase 1 using Doublecortin-like kinase 1 antibody. Doublecortin-like kinase 1 expression was examined in a paraffin-embedded section of human glioma tissue. Heat-mediated antigen retrieval was performed using EDTA buffer (pH 8.0). Tissue sections were blocked with normal goat serum prior to incubation with Doublecortin-like kinase 1 antibody overnight at 4Â°C. Signal was visualized using an HRP-based detection system with DAB chromogen, followed by hematoxylin counterstaining.



Western blot analysis of Doublecortin-like kinase 1 using Doublecortin-like kinase 1 antibody. Lane 1: human U251 whole cell lysates; Lane 2: human MCF-7 whole cell lysates; Lane 3: human SH-SY5Y whole cell lysates; Lane 4: rat brain tissue lysates; Lane 5: rat C6 whole cell lysates; Lane 6: mouse brain tissue lysates; Lane 7: human WPMY-1 whole cell lysates. A predominant band is detected at approximately 82 kDa, consistent with the expected molecular weight of Doublecortin-like kinase 1. The observed expression pattern aligns with known enrichment of DCLK1 in neuronal and selected epithelial cell types.



Flow cytometry analysis of fixed human SH-SY5Y cells with Doublecortin-like kinase 1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Doublecortin-like kinase 1 antibody.

Description

Doublecortin-like kinase 1 antibody targets Doublecortin-like kinase 1, encoded by the DCLK1 gene. Doublecortin-like kinase 1 is a cytoplasmic serine-threonine kinase that combines microtubule-binding domains with a C-terminal kinase region, enabling coordination between cytoskeletal organization and intracellular signaling. Originally characterized in neuronal systems, DCLK1 is now recognized for its broader role in epithelial biology and cellular plasticity.

Functionally, Doublecortin-like kinase 1 contributes to regulation of cell morphology, migration, and differentiation by modulating microtubule stability and kinase-dependent signaling pathways. Through these combined activities, DCLK1 supports dynamic changes in cellular structure and behavior. A Doublecortin-like kinase 1 antibody supports studies focused on cytoskeletal signaling, cell fate regulation, and kinase-driven cellular processes.

DCLK1 expression is restricted to specific cell populations rather than being ubiquitous. In epithelial tissues, DCLK1 is frequently associated with rare cells exhibiting progenitor-like or regenerative characteristics. Its cytoplasmic localization and selective expression pattern have made DCLK1 a widely used marker in studies examining cellular heterogeneity and tissue renewal mechanisms.

From a disease-relevance perspective, Doublecortin-like kinase 1 has been extensively investigated in cancer research. Elevated DCLK1 expression has been linked to tumor initiation, progression, and resistance to therapy in multiple cancer types, particularly within the gastrointestinal tract. These findings have positioned DCLK1 as a biomarker of tumor-associated cell populations and a protein of interest for studies of cancer cell plasticity and signaling.

At the molecular level, Doublecortin-like kinase 1 contains conserved domains that regulate both microtubule interaction and kinase activity. Alternative splicing and post-translational regulation can influence its functional behavior and apparent migration in biochemical assays without altering the primary amino acid sequence. Doublecortin-like kinase 1 antibody reagents support research applications focused on cancer biology, progenitor cell regulation, and microtubule-

associated kinase function, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the Doublecortin-like kinase 1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human DCLK1 recombinant protein (amino acids M1-S728) was used as the immunogen for the Doublecortin-like kinase 1 antibody.

Storage

After reconstitution, the Doublecortin-like kinase 1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.