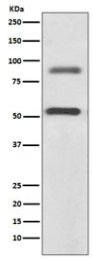
DCLK1 Antibody / Doublecortin-like kinase 1 [clone AAFA-4] (RQ4720)

Catalog No.	Formulation	Size
RQ4720	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	AAFA-4
Purity	Affinity purified
UniProt	O15075
Applications	Western Blot : 1:500-1:2000
Limitations	This DCLK1 antibody is available for research use only.



Western blot testing human SH-SY5Y cell lysate with DCLK1 antibody. Predicted molecular weight ~82/47 kDa (multiple isoforms).

Description

DCLK1 antibody targets Doublecortin-like kinase 1, encoded by the DCLK1 gene. Doublecortin-like kinase 1 is a microtubule-associated serine-threonine kinase that combines a doublecortin domain with a kinase domain, allowing it to link cytoskeletal organization with intracellular signaling. The protein is primarily localized to the cytoplasm, where it associates with microtubules and contributes to regulation of cellular structure and polarity.

Functionally, Doublecortin-like kinase 1 has been shown to regulate microtubule dynamics and cellular differentiation.

Through its kinase activity and microtubule-binding domains, DCLK1 influences cell shape, migration, and intracellular transport. These functions position DCLK1 as an important regulator of cytoskeletal remodeling in both normal and disease-associated contexts. A DCLK1 antibody supports studies focused on cytoskeletal regulation and kinase-driven signaling pathways.

DCLK1 expression is tissue-dependent and has been reported in neuronal populations as well as epithelial tissues. In non-neuronal systems, DCLK1 is frequently associated with rare cell populations that exhibit progenitor or stem-like features. Its subcellular localization and expression level can vary depending on developmental stage and cellular state, reflecting its multifunctional regulatory role.

From a disease-relevance perspective, Doublecortin-like kinase 1 has been extensively studied in cancer biology. DCLK1 has been described as a marker of tumor-initiating cells in gastrointestinal and other epithelial cancers, where it is linked to tumor growth, invasion, and therapeutic resistance. These findings have made DCLK1 a protein of interest for studies examining cancer stem cell biology and targeted signaling mechanisms.

At the molecular level, Doublecortin-like kinase 1 contains conserved doublecortin domains that mediate microtubule binding and a C-terminal kinase domain that regulates downstream signaling. Post-translational modifications and alternative isoforms can influence its functional behavior and apparent migration in biochemical assays. DCLK1 antibody reagents support research applications focused on cytoskeletal signaling, stem cell-associated pathways, and cancer-related protein regulation, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the DCLK1 antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human Doublecortin-like kinase 1 was used as the immunogen for the DCLK1 antibody.

Storage

Store the DCLK1 antibody at -20oC.