10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-DISC1 Antibody
Catalog # ABO11330

Specification

Anti-DISC1 Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	Q9NRI5
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
abbit IgG polyclonal antibody for Disrupted in schizophrenia 1 protein(DISC1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-DISC1 Antibody - Additional Information

Gene ID 27185

Other Names
Disrupted in schizophrenia 1 protein, DISC1, KIAA0457

Calculated MW
93611 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat, Mouse

Subcellular Localization
Cytoplasm. Cytoplasm, cytoskeleton. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cell junction, synapse, postsynaptic cell membrane, postsynaptic density . Colocalizes with NDEL1 in the perinuclear region and the centrosome (By similarity). Localizes to punctate cytoplasmic foci which overlap in part with mitochondria. Colocalizes with PCNT at the centrosome. .

Tissue Specificity
Ubiquitous. Highly expressed in the dentate gyrus of the hippocampus. Also expressed in the temporal and parahippocampal cortices and cells of the white matter. .

Protein Name
Disrupted in schizophrenia 1 protein

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence in the middle region of human DISC1(461-477aa EKQQLQKEIEALQARMF), different from the related mouse sequence by two amino acids, and from the related rat sequence by four amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-DISC1 Antibody - Protein Information

Name DISC1 (HGNC:2888)

Synonyms KIAA0457

Function
Involved in the regulation of multiple aspects of embryonic and adult neurogenesis (PubMed:19303846, PubMed:19502360). Required for neural progenitor proliferation in the ventrical/subventrical zone during embryonic brain development and in the adult dentate gyrus of the hippocampus (By similarity). Participates in the Wnt-mediated neural progenitor proliferation as a positive regulator by modulating GSK3B activity and CTNNB1 abundance (PubMed:19303846). Plays a role as a modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis, including neuron positioning, dendritic development and synapse formation (By similarity). Inhibits the activation of AKT-mTOR signaling upon interaction with CCDC88A (By similarity). Regulates the migration of early-born granule cell precursors toward the dentate gyrus during the hippocampal development (PubMed:19502360). Inhibits ATF4 transcription factor activity in neurons by disrupting ATF4 dimerization and DNA-binding (By similarity). Plays a role, together with PCNT, in the microtubule network formation (PubMed:18955030).

Cellular Location
Cytoplasm. Cytoplasm, cytoskeleton Mitochondrion. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Postsynaptic density {ECO:0000250|UniProtKB:Q811T9}. Note=Colocalizes with NDEL1 in the perinuclear region and the centrosome (By similarity). Localizes to punctate cytoplasmic foci which overlap in part with mitochondria (PubMed:12506198, PubMed:15797709). Colocalizes with PCNT at the centrosome (PubMed:18955030). {ECO:0000250|UniProtKB:Q811T9, ECO:0000269|PubMed:12506198, ECO:0000269|PubMed:15797709, ECO:0000269|PubMed:18955030}

Tissue Location
Ubiquitous. Highly expressed in the dentate gyrus of the hippocampus. Also expressed in the temporal and parahippocampal cortices and cells of the white matter.

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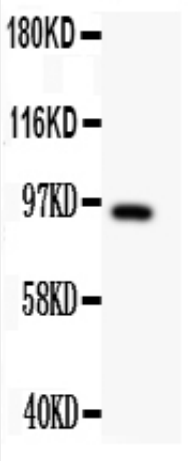
Anti-DISC1 Antibody - Protocols

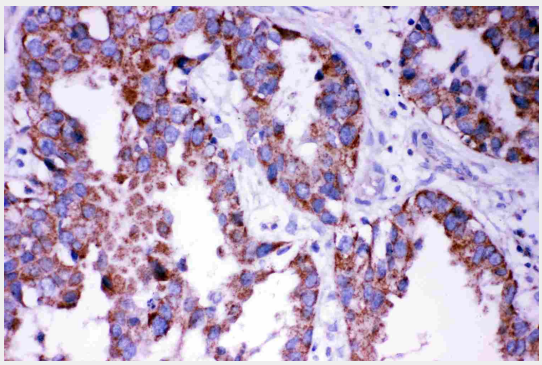
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-DISC1 Antibody - Images



Anti- DISC1 antibody, ABO11330, Western blottingAll lanes: Anti DISC1 (ABO11330) at 0.5ug/mlWB: U87 Whole Cell Lysate at 40ugPredicted bind size: 94KDObserved bind size: 94KD



Anti- DISC1 antibody, ABO11330, IHC(P)IHC(P): Human Lung Cancer Tissue

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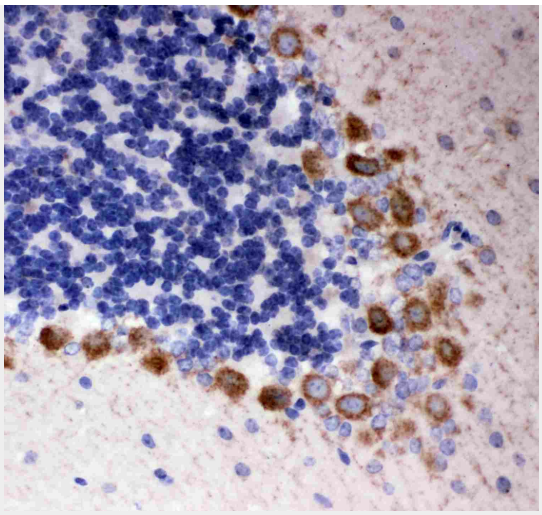

Anti- DISC1 antibody, ABO11330,IHC(P)IHC(P): Rat Cerebellum Tissue

Anti-DISC1 Antibody - Background

DISC1(Disrupted in Schizophrenia 1), is a protein that is encoded by the DISC1 gene in humans. Ma et al.(2002) determined that the mouse Disc1 gene maps to chromosome 8 in a region with homology of synteny to human chromosome 1q42. Ozeki et al.(2003) demonstrated that rodent Disc1 expression displayed pronounced developmental regulation, with the highest levels in late embryonic life during development of the cerebral cortex. Millar et al.(2005) showed that DISC1 interacts with the UCR2 domain of phosphodiesterase-4B, implicated in susceptibility to schizophrenia, and that elevation of cellular cAMP leads to dissociation of PDE4B from DISC1 and in increase in PDE4B activity.