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DISC1 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM2109b

Product Information

Application	WB, E
Primary Accession	Q9NRI5
Other Accession	NP_061132.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Clone Names	584CT4.2.1
Calculated MW	93611
Antigen Region	701-728

Additional Information

Gene ID	27185
Other Names	Disrupted in schizophrenia 1 protein, DISC1, KIAA0457
Target/Specificity	This DISC1 antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 701-728 amino acids from human DISC1.
Dilution	WB~~1:500~1000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Euglobin precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DISC1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Background

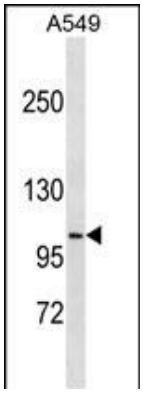
This gene encodes a protein with multiple coiled coil motifs which is located in the nucleus, cytoplasm and mitochondria. The protein is involved in neurite outgrowth and cortical development through its interaction with other proteins. This gene is disrupted in a t(1;11)(q42.1;q14.3) translocation which segregates with schizophrenia and related psychiatric disorders in a large Scottish family. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq].

References

Park, Y.U., et al. Proc. Natl. Acad. Sci. U.S.A. 107(41):17785-17790(2010)
Raznahan, A., et al. Mol. Psychiatry (2010) In press :
Ruano, G., et al. Pharmacogenomics 11(7):959-971(2010)
Kaibuchi, K., et al. Nihon Shinkei Seishin Yakurigaku Zasshi 30(3):149-152(2010)
Shulman, J.M., et al. PLoS ONE 5 (6), E11244 (2010) :

Images

DISC1 Antibody(Cat. #AM2109b) western blot analysis in A549 cell line lysates (35µg/lane).This demonstrates the DISC1 antibody detected the DISC1 protein (arrow).



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