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Rabbit Polyclonal Anti-DISC1 antibody

Catalog Number: DISC-101AP

Lot Number:

General Information

Product	DISC1 Antibody Affinity Purified
Description	Disrupted in Schizophrenia 1 Antibody
Accession #	Uniprot: Q5T409 GenBank: CAI17205
Verified Applications	ELISA, IP, WB
Species Cross Reactivity	Human
Host	Rabbit
Immunogen	Synthetic peptide taken within amino acid region 730-750 on DISC1 protein.
Alternative Nomenclature	C1orf136 antibody, DISC1 antibody, Disrupted in schizophrenia 1 antibody, KIAA0457 antibody, RP4-730B13.1 antibody, SCZD9 antibody

Physical Properties

Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Immunoglobulin & Concentration	0.72-0.76 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20ºC for long term storage.

Recommended Dilutions

DOT Blot	1:10,000
ELISA	1:10,000
Immunoprecipitation	1:200
Western Blot	1:500

Related Products	Catalog #
FITC-Conjugated	DISC-FITC
Antigenic Blocking Peptide	P-DISC
Western Blot Positive Control	PC-DISC

Overview:

The genetic and epidemiological studies suggest that schizophrenia is largely due to individual variation and susceptibility of different alleles with small to moderate effects on multiple genes. Molecular genetic studies have identified several potential regions of linkage and 2 associated chromosomal abnormalities in Schizophrenia and suggest several positional candidate genes including Disrupted in Schizophrenia 1 (DISC1). DISC1 is linked to Schizophrenia by association and linkage studies in independent population and is the only gene whole open reading frame (ORF) is truncated and co segregates with mojor mental illnesses in a Scottish population. It is well known that several neuronal pathways are disrupted in schizophrenia, the complexity of the genetics underlying schizophrenia is highlighted by the multitude of molecular pathways that have been reported to be disrupted in the disorder including muscarinic, serotonergic, and glutamatergic signaling systems. The genetic and epidemiological studies suggest that schizophrenia is largely due to individual variation and susceptibility of different alleles with small to moderate effects on multiple genes. Molecular genetic studies have identified several potential regions of linkage and 2 associated chromosomal abnormalities in Schizophrenia and suggest several positional candidate genes including Disrupted in Schizophrenia 1 (DISC1). Recent epigenetic and molecular biology data strongly suggest Disrupted in Schizophrenia 1 (Disc 1) gene as a risk factor of great significance in the underlying causes of Schizophrenia and related disorders. No functional significance of this protein was evident despite the presence of several well characterized protein domains on Disc 1. Recently the discovery and identification of its binding partners has revealed an incredible diversity of potential cellular and physiological functions. The interactive yeast-two hybrid screening revealed the “Disc 1 interactome” which contained several novel protein-protein interaction sites suggesting its role in several diverse functions. Studies on Disc 1 interactome showed protein-protein interaction with ligands that are consistent with the underlying molecular pathology observed at the synaptic level and the cognitive deficits seen behaviorally in schizophrenics (1). Phosphodiesterase Type 4B (PDE4B) and Ndell-EOPA are two known target proteins that actively interact with Disc 1 (2).

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References:

1. Camargo LM, Wang Q, Brandon NJ. What can we learn from the disrupted in schizophrenia 1 interactome: lessons for target identification and disease biology. Novartis Found Symp. 2008;289:208-16; discussion 216-21, 238-40).
2. Naoya Sawamura., Takako Sawamura-Yamamoto, Yuji Ozeki, Christopher A. Ross, and Akira Sawa. A form of DISC1 enriched in nucleus: Altered subcellular distribution in orbitofrontal cortex in psychosis and substance/alcohol abuse. PNAS 102, 1187-1192, 2005.
3. Takatoshi Hikida, Hanna Jaaro-Peled, Saurav Seshadri, Kenichi Oishi, Caroline Hookway, Stephanie Kong, Di Wu, Rong Xue, Manuella Andradé, Stephanie Tankou, Susumu Mori, Michela Gallagher, Koko Ishizuka, Mikhail Pletnikov, Satoshi Kida, and Akira Sawa. Dominant-negative DISC1 transgenic mice display schizophrenia-associated phenotypes detected by measures translatable to humans. PNAS 104, 14501-14506, 2007.
4. Joseph H. Callicott, Richard E. Straub, Lukas Pezawas, Michael F. Egan, Venkata S. Mattay, Ahmad R. Hariri, Beth A. Verchinski, Andreas Meyer-Lindenberg, Rishi Balkissoon, Bhaskar Kolachana, Terry E. Goldberg, and Daniel R. Weinberger. Variation in DISC1 affects hippocampal structure and function and increases risk for schizophrenia. PNAS 102, 8627-8625-2005.

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.