

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human DISC1 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 685920
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human DISC1 Lys101-Arg260 Accession # Q9NR15
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

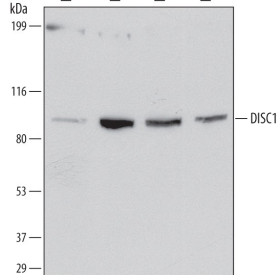
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunohistochemistry</b>	8-25 µg/mL	See Below

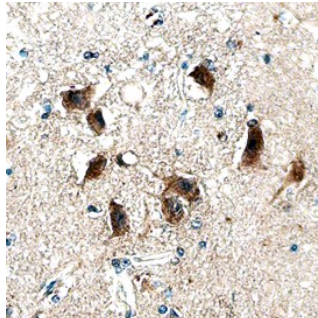
## DATA

**Western Blot**



**Detection of Human DISC1 by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, Raji human Burkitt's lymphoma cell line, Daudi human Burkitt's lymphoma cell line, and Ramos human Burkitt's lymphoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human DISC1 Monoclonal Antibody (Catalog # MAB6699) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for DISC1 at approximately 100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunohistochemistry**



**DISC1 in Human Brain.** DISC1 was detected in immersion fixed paraffin-embedded sections of human brain (hippocampus) using Mouse Anti-Human DISC1 Monoclonal Antibody (Catalog # MAB6699) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cell bodies. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Disrupted in schizophrenia 1 (DISC1) is a 100 kDa cytoplasmic scaffold protein that is associated with the development of schizophrenia, bipolar disorder, and recurrent major depression. It plays a role in post-synaptic density development and neurogenesis as well as centrosome and microtubule dynamics. DISC1 interacts with a range of intracellular proteins including Kinesin 1, NDE1, PDE4, GSK-3 beta, GRB2, PACAP, RAC1, TNK1, and FEZ1. It contains four coiled-coil domains (aa 366-394, aa 452-505, aa 602-666, and aa 802-830) which mediate the assembly of DISC1 into a variety of multimers. DISC1 multimerization and its ability to interact with various binding partners are regulated by post-translational modifications and proteolysis. Alternate splicing generates additional isoforms of human DISC1 that are truncated before the first or following the third coiled coil domain. Within aa 101-260, human DISC1 shares approximately 43% aa sequence identity with mouse and rat DISC1.