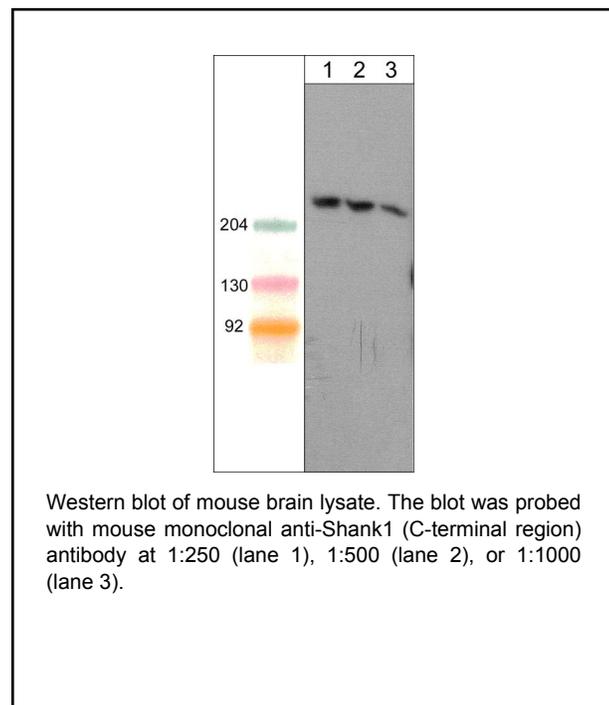


Background

A variety of anchoring and scaffold proteins that are associated with postsynaptic density (PSD) proteins have been discovered. In particular, PSD-95, GRIP, and Homer have been reported to be anchoring proteins for NMDA, AMPA, and metabotropic glutamate receptors. Shank1 is a synaptic protein that may bridge the NMDA receptor complex and the mGluR receptor complex. The Shank family includes Shank1, Shank2 (ProSAP1), and Shank3 (ProSAP2). These proteins contain several domains involved in protein-protein interactions. These include ankyrin repeats, an SH3 domain, a PDZ domain, a SAM domain, and a proline-rich region. The PDZ domain of Shank directly interacts with the C-terminal region of GKAP, which can bind to the GK domain of PSD-95 family members. The proline-rich region of Shank directly interacts with the EVH1 domain of Homer. Shank1 knock-out mice have altered PSD protein composition, reduced size of dendritic spines, and smaller PSDs. In addition, these mice have weaker basal synaptic transmission and show increased anxiety-related behavior.

Background References

Lim, S. et al. (1999) *J. Biol. Chem.* 274(41):29510.
 Naisbitt, S. et al. (1999) *Neuron* 23:569.
 Hung, A.Y. et al. (2008) *J. Neurosci.* 28:1697.



Applications

WB 1:1000
 ELISA 1:2000

Species Reactivity

Hu, Rt, Ms

Specificity

This antibody detects a 225 kDa* protein corresponding to the molecular mass of Shank1 on SDS-PAGE immunoblots of adult mouse brain.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Isotype: IgG1

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Immunogen

Uniprot ID: Q9WV48

Clone M369 was generated from a sequence corresponding to amino acids in the C-terminal region of rat Shank1. This sequence has high homology to human and mouse Shank1.

Buffer and Storage

Mouse monoclonal, protein A purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Related Products

AK6060 Actin & Tubulin Antibody Sampler Kit
 CK6230 δ1-Catenin Phospho-Regulation Antibody Sampler Kit
 CK6200 CRMP2 Phospho-Regulation Antibody Sampler Kit
 MK6050 MAP Kinase Activation Antibody Sampler Kit
 BL7011 Mouse Brain Lysate

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