

Product Information

Anti-Dysbindin

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200409**

Product Description

Anti-Dysbindin is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at an internal region of human dysbindin (GeneID: 84062), conjugated to KLH. The corresponding sequence is identical in human dysbindin isoforms b, c and in rat and mouse dysbindin. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Dysbindin specifically recognizes human and rat dysbindin. The antibody may be used in various immunochemical techniques including immunoblotting (~60 kDa) and immunofluorescence. Detection of the dysbindin band by immunoblotting is specifically inhibited by the dysbindin immunizing peptide.

Dysbindin (also known as DTNBP1) is a neuronal protein that controls synaptic homeostasis by regulating the exocytosis and formation of synaptic vesicles.¹ The DTNBP1 gene has been linked to schizophrenia in humans.^{1,2} Polymorphism of DTNBP1 confers susceptibility to schizophrenia through a decreased expression of dysbindin. The expression of dysbindin mRNA is decreased in brains of schizophrenic patients, especially in the hippocampal formation.^{2,3} Deletion mutation of DTNBP1 in sandy (sdy) mouse results in loss of dysbindin and impaired long term memory retention and working memory.⁴ Mutations in the human DTNBP1 gene causes a novel form of Hermansky-Pudlak syndrome (HPS) called HPS-7, a genetically heterogeneous disorder caused by abnormal vesicle trafficking to lysosomes and related organelles. Dysbindin is a key component of the biogenesis of lysosome-related organelles complex 1 (BLOC-1), which regulates the trafficking of proteins in the lysosomal pathway, suggesting that dysbindin has a role in the biogenesis of lysosome-related organelles.⁵ DTNBP1 mRNA is widely expressed in the brain, located in postsynaptic densities and synaptic vesicles of neurons. At postsynaptic densities it is thought to be involved in trafficking and tethering of receptors and signal transduction proteins.⁶

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended using HEK-293T cells overexpressing human dysbindin.

Immunofluorescence: A working concentration of 5-10 µg/mL is recommended using PC12 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Dickman, D.K., and Davis, G.W., *Science*, **326**, 1127-1130 (2009).
2. Weickert, C.S., et al., *Arch. Gen. Psychiatry*, **61**, 544-555 (2010).
3. Talbot, K., et al., *J. Clin. Invest.*, **113**, 1353-1363 (2004).
4. Takao, K., et al., *Mol. Brain*, **1**, 11- (2008).

5. Ghiani, C.A., et al., *Mol. Psychiatry*, **15**, 204-215 (2010).

6. Tang, T.T., et al., *Proc. Natl. Acad. Sci. USA*, **106**, 21395-21400 (2009).

ER,RC,PHC 04/12-1