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SAPAP3 Antibody

Catalog # ASC10619

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O95886
Other Accession	O95886, 71153509
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	106040
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SAPAP3 antibody can be used for detection of SAPAP3 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	58512
Other Names	Disks large-associated protein 3, DAP-3, PSD-95/SAP90-binding protein 3, SAP90/PSD-95-associated protein 3, SAPAP3, DLGAP3, DAP3
Target/Specificity	DLGAP3;
Reconstitution & Storage	SAPAP3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	SAPAP3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DLGAP3
Synonyms	DAP3
Function	May play a role in the molecular organization of synapses and neuronal cell signaling. Could be an adapter protein linking ion channel to the subsynaptic cytoskeleton. May induce enrichment of PSD- 95/SAP90 at the plasma membrane.
Cellular Location	Cell membrane; Peripheral membrane protein. Postsynaptic density. Synapse. Note=Postsynaptic density of neuronal cells

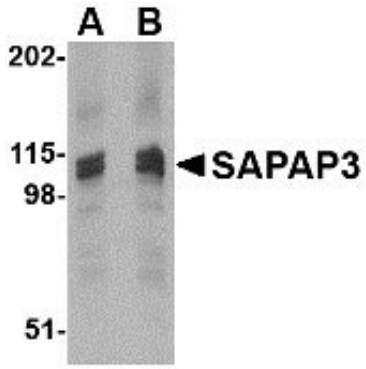
Background

SAPAP3 Antibody: SAP90/PSD-95-associated protein 3 (SAPAP3, also known as DLGAP3) is a member of a protein family whose members specifically interact with PSD-95/SAP90, a membrane-associated guanylate kinase localized at postsynaptic density (PSD) in neuronal cells. Like the other SAPAP proteins, SAPAP3 is thought to be an adaptor protein that also interacts with different synaptic scaffolding proteins, cytoskeletal and signaling components, such as focal adhesion kinase (FAK) and proline-rich tyrosine kinase 2 (PYK2). Both SAPAP3 protein and mRNA are targeted to dendrites, whereas SAPAP1, -2, and -4 mRNAs are detected mainly in cell bodies. Recent experiments have suggested that SAPAP3 may be involved in obsessive-compulsive disorder (OCD), as mice lacking SAPAP3 exhibited OCD-like symptoms which could be relieved by lentiviral-mediated selective expression of SAPAP3 in the striatum of SAPAP3-mutant mice. At least two isoforms are known to exist.

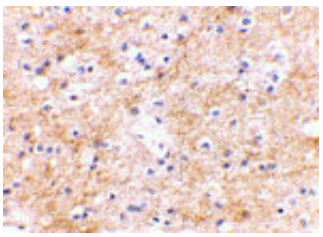
References

SAPAPs. A family of PSD-95/SAP90-associated proteins localized at postsynaptic density. J. Biol. Chem.1997; 272:11943-51.
Kindler S, Rehbein M, Classen B, et al. Distinct spatiotemporal expression of SAPAP transcripts in the developing rat brain: a novel dendritically localized mRNA. Brain Res. Mol. Brain Res.2004; 126:14-21.
Bongiorno-Borbone L, Kadare G, Benfenati F, et al. FAK and PYK2 interact with SAP/PSD-95-associated protein-3. Biochem. Biophys. Res. Commun.2005; 337:641-6.
Welch JM, Wang D, and Feng G. Differential mRNA expression and protein localization of the SAP90/PSD-95-associated proteins (SAPAPs) in the nervous system of the mouse. J. Comp. Neurol.2004; 472:24-39.

Images

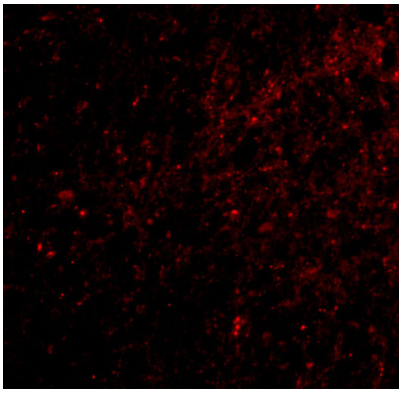


Western blot analysis of SAPAP3 in rat brain tissue lysate with SAPAP3 antibody at (A) 1 (B) 2 µg/mL.



Immunohistochemical staining of human brain tissue using SAPAP3 antibody at 2.5 µg/mL.

Immunofluorescence of SAPAP3 in human brain tissue with SAPAP3 antibody at 20 µg/mL.



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