

SAPAP1 Antibody

Catalog # ASC10701

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O60500
Other Accession	NP_004737 , 4758822
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	134742
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SAPAP1 antibody can be used for detection of SAPAP1 by Western blot at 0.5 - 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.

Additional Information

Gene ID	4868
Other Names	Nephrin, Renal glomerulus-specific cell adhesion receptor, NPHS1, NPHN
Target/Specificity	NPHS1; At least three isoforms of SAPAP1 are known to exist. This SAPAP1 antibody will not cross-react with other SAPAP proteins.
Reconstitution & Storage	SAPAP1 antibody can be stored at 4°C for three months and -20°C, 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	SAPAP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NPHS1
Synonyms	NPHN
Function	Seems to play a role in the development or function of the kidney glomerular filtration barrier. Regulates glomerular vascular permeability. May anchor the podocyte slit diaphragm to the actin cytoskeleton. Plays a role in skeletal muscle formation through regulation of myoblast fusion (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Note=Predominantly

located at podocyte slit diaphragm between podocyte foot processes. Also associated with podocyte apical plasma membrane.

Tissue Location

Specifically expressed in podocytes of kidney glomeruli

Background

SAPAP1 Antibody: SAP90/PSD-95-associated protein 1 (SAPAP1, also known as DLGAP1 or GKAP) 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, SAPAP1 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). SAPAP1 mRNA is targeted to cell bodies in a similar manner to SAPAP2 and -4, whereas SAPAP3 mRNA is detected mainly in cell bodies. SAPAP1 protein however, is targeted to the synapse and is not reliant on the synaptic localization of PSD-95 or the synaptic scaffolding molecule (S-SCAM).

References

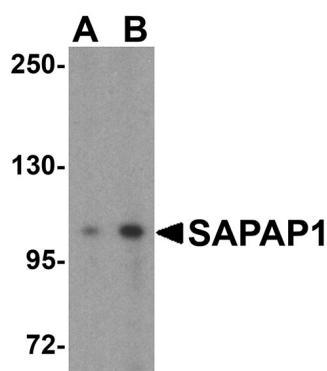
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Kindler S, Rehbein M, Classen B, et al. Distinct spatiotemporal expression of SAPAP transcripts in the developing rat brain: a novel dendritically localized mRNA. Brain Res. Mol. Brain Res.2004; 126:14-21.

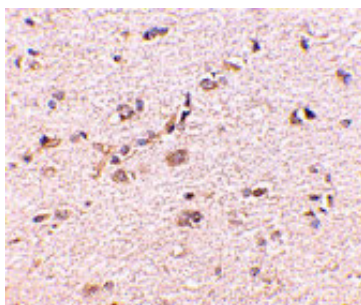
Bongiorno-Borbone L, Kadare G, Benfenati F, et al. FAK and PYK2 interact with SAP/PSD-95-associated protein-3. Biochem. Biophys. Res. Commun.2005; 337:641-6.

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

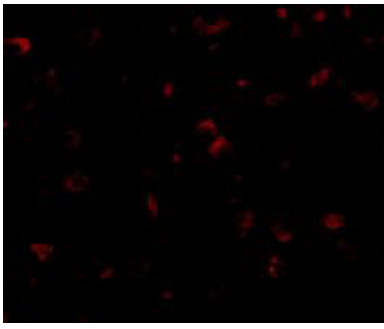


Western blot analysis of SAPAP1 in rat brain tissue lysate with SAPAP1 antibody at (A) 0.5 and (B) 1 μ g/mL.



Immunohistochemistry of SAPAP1 in human brain with SAPAP1 antibody at 5 μ g/mL.

Immunofluorescence of SAPAP1 in Human Brain cells with SAPAP1 antibody at 20 μ g/mL.



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