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# SAPAP1 Antibody

Catalog # ASC10701

## Product Information

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| **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 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL. |

## Additional Information

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| **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

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| **Name** | NPHS1 ( HGNC:7908) |
| **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 |

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| | 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 |

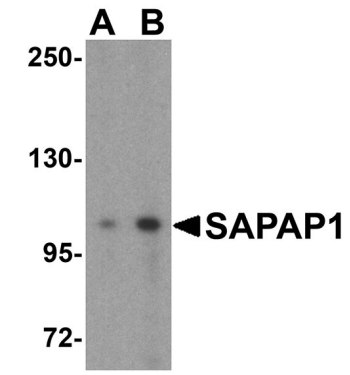
## Background

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).

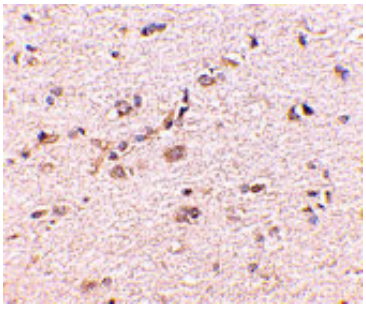
## References

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

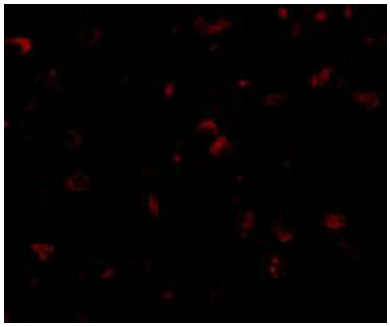



Western blot analysis of SAPAP1 in rat brain tissue lysate with SAPAP1 antibody at (A) 0.5 and (B) 1 µg/mL.



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

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



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