10320 Camino Santa Fe, Suite G
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SHANK1 Antibody
SHANK1 Antibody, Clone S22-21
Catalog # ASM10205

Specification

SHANK1 Antibody - Product Information

Application	**IHC, WB**
Primary Accession	Q9WV48
Other Accession	NP_113939.2
Host	**Mouse**
Isotype	**IgG1**
Reactivity	**Human, Mouse, Rat**
Clonality	**Monoclonal**

Description
Mouse Anti-Rat SHANK1 Monoclonal IgG1

Target/Specificity
Detects ~190-220 kDa (alternative splice variants). No cross-reactivity against Shank2 or Shank3.

Other Names
GKAP/SAPAP interacting protein Antibody, OTTHUMP00000174437 Antibody, SH3 and multiple ankyrin repeat domains 1 Antibody, SH3 and multiple ankyrin repeat domains protein 1 Antibody, SH3/ankyrin domain gene 1 Antibody, SHAN1_HUMAN Antibody, SHANK 1 Antibody, Shank1 Antibody, Shank1a Antibody, Somatostatin receptor interacting protein Antibody, Somatostatin receptor-interacting protein Antibody, SPANK 1 Antibody, SPANK1 Antibody, SSTR interacting protein Antibody, SSTR-interacting protein Antibody, SSTRIP Antibody, Synamon Antibody

Immunogen
Fusion protein amino acids 469-691 (SH3/PDZ domains) of rat Shank1

Purification
Protein G Purified

Storage	**-20ºC**

Storage Buffer
PBS pH7.4, 50% glycerol, 0.09% sodium azide

Shipping Temperature	**Blue Ice or 4ºC**

Certificate of Analysis
1 µg/ml of SMC-329 was sufficient for detection of Shank1 in 10 µg of rat brain lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Cellular Localization
Cytoplasm | Cell Junction | Synapse | Postsynaptic Cell Membrane | Postsynaptic Density

SHANK1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

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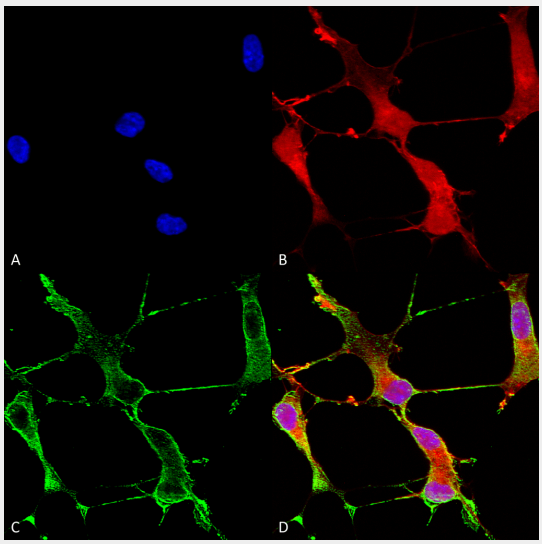
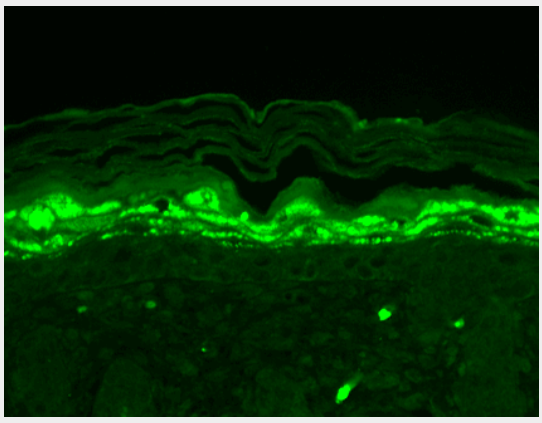
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SHANK1 Antibody - Images



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-SHANK1 Monoclonal Antibody, Clone S22-21 (ASM10205). Tissue: Neuroblastoma cells (SH-SY5Y). Species: Human. Fixation: 4% PFA for 15 min. Primary Antibody: Mouse Anti-SHANK1 Monoclonal Antibody (ASM10205) at 1:50 for overnight at 4°C with slow rocking. Secondary Antibody: AlexaFluor 488 at 1:1000 for 1 hour at RT. Counterstain: Phalloidin-iFluor 647 (red) F-Actin stain; Hoechst (blue) nuclear stain at 1:800, 1.6mM for 20 min at RT. (A) Hoechst (blue) nuclear stain. (B) Phalloidin-iFluor 647 (red) F-Actin stain. (C) SHANK1 Antibody (D) Composite.



Immunohistochemistry analysis using Mouse Anti-SHANK1 Monoclonal Antibody, Clone S22-21 (ASM10205). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-SHANK1 Monoclonal Antibody (ASM10205) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Filaggrin-like staining (upper layer aggregations of staining).

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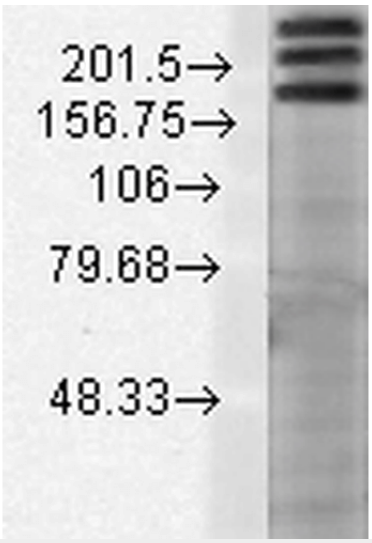

Western Blot analysis of Rat brain membrane lysate showing detection of SHANK1 protein using Mouse Anti-SHANK1 Monoclonal Antibody, Clone S22-21 (ASM10205). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-SHANK1 Monoclonal Antibody (ASM10205) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

SHANK1 Antibody - Background

Shank proteins make up a family of scaffold proteins identified through their interaction with a variety of membrane and cytoplasmic proteins (1). Shank proteins at postsynaptic sites of excitatory synapses play roles in signal transmission into the postsynaptic neuron. Studies suggest that Shank2 is expressed in the neurons of the developing retina, and could play a role in the neuronal differentiation of the developing retina (2). Other recent studies suggest that the disruption of glutamate receptors at the Shank postsynaptic platform could contribute to the destruction of the postsynaptic density, which underlies the synaptic dysfunction and loss in Alzheimer's disease (3).

SHANK1 Antibody - References

1. Sheng M., and Kim E. (2000) Journal of Cell Science. 113: 1851-1856.
2. Kim J.H., et al. (2009) Exp Mol Med. 41(4): 236-242.
3. Gong Y., et al. (2009) Brain Res. 1292: 191-198.