

AP55426PU-N**Polyclonal Antibody to SHANK3 (Center) - Aff - Purified**

Alternate names:	PSAP2, ProSAP2, Proline-rich synapse-associated protein 2, SH3 and multiple ankyrin repeat domains 3, SPANK-2
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	SH3 and multiple ankyrin repeat domains 3 (SHANK3), a member of the Shank gene family, plays a role in synapse formation and dendritic spine maturation. Shank proteins (Shank 1-3) containing PDZ domains are scaffold proteins of the postsynaptic density (PSD) that connect neurotransmitter receptors and ion channels proteins to the actin cytoskeleton and G-protein-coupled signaling pathways. Transcript splice variation in the Shank family influences the spectrum of Shank-interacting proteins in the PSDs of adult and developing brain to ensure normal development. Mutations of SHANK3 are a cause of autism spectrum disorder (ASD) and the neurological symptoms of 22q13.3 deletion syndrome.
NCBI:	NP_001073889
Host / Isotype:	Rabbit / IgG
Immunogen:	19 amino acid synthetic peptide near the center of human SHANK3 (AP55426CP-N)
Format:	State: Liquid purified Ig fraction Purification: Affinity chromatography purified via peptide column Buffer System: PBS containing 0.02% Sodium Azide as preservative
Applications:	Western blot: 1-2 µg/ml. <i>Positive Control:</i> 3T3 cell lysate. Immunofluorescence: Start at 2.5 µg/ml. Immunohistochemistry on Paraffin Sections: Start at 2.5 µg/ml. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	At least three alternatively spliced transcript isoforms of SHANK3 are known to exist.
Species Reactivity:	Tested: Human, Mouse.
Add. Information:	Blocking peptide available: AP55426CP-N
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
General Readings:	1. Sheng M and Kim E. The Shank family of scaffold proteins. J. Cell Sci. 2000; 113:1851-6. 2. Park E, Na M, Choi J, Kim S, Lee JR, Yoon J, et al. The Shank family of postsynaptic density proteins interacts with and promotes synaptic accumulation of the beta PIX guanine nucleotide exchange factor for Rac1 and Cdc42. J Biol Chem. 2003 May 23;278(21):19220-9. Epub 2003 Mar 7. PubMed PMID: 12626503. 3. Lim S, Naisbitt S, Yoon J, Hwang JI, Suh PG, Sheng M, et al. Characterization of the Shank family of synaptic proteins. Multiple genes, alternative splicing, and

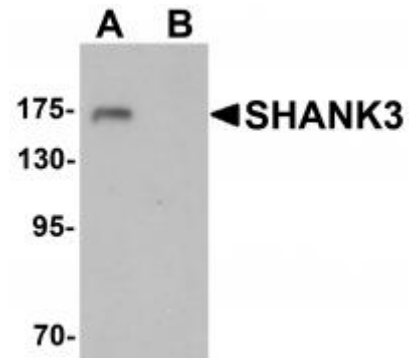
differential expression in brain and development. *J Biol Chem.* 1999 Oct 8;274(41):29510-8. PubMed PMID: 10506216.

4. Durand CM, Betancur C, Boeckers TM, Bockmann J, Chaste P, Fauchereau F, et al. Mutations in the gene encoding the synaptic scaffolding protein SHANK3 are associated with autism spectrum disorders. *Nat Genet.* 2007 Jan;39(1):25-7. Epub 2006 Dec 17. PubMed PMID: 17173049.

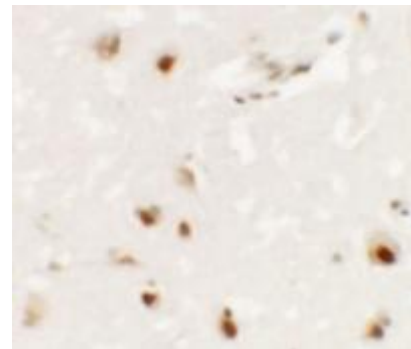
5. Bonaglia MC, Giorda R, Mani E, Aceti G, Anderlid BM, Baroncini A, et al. Identification of a recurrent breakpoint within the SHANK3 gene in the 22q13.3 deletion syndrome. *J Med Genet.* 2006 Oct;43(10):822-8. Epub 2005 Nov 11. PubMed PMID: 16284256.

Pictures:

Western blot analysis of SHANK3 in 3T3 cell lysate with SHANK3 antibody at 1 ug/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of SHANK3 in human brain tissue with SHANK3 antibody at 2.5 ug/mL.



Immunofluorescence of SHANK3 in human brain tissue with SHANK3 antibody at 20 ug/mL.

