BACKGROUND

SH3 and multiple Ankyrin repeat domains 1-3 (Shank 1-3) of the Shank/ProSAP family are molecular scaffolds in the postsynaptic density (PSD). The PSD is an electron-dense structure underneath the postsynaptic plasma membrane of excitatory synapses that anchors and clusters glutamate receptors opposite to the presynaptic neurotransmitter release site. Shank proteins contain PDZ modular domains that coordinate the synaptic localization of ion channels, receptors, signaling enzymes and cell adhesion molecules. The PDZ domain mediates protein-protein interactions via the recognition of a conserved sequence motif at the C-terminus of their target protein(s). Shank recruits βPIX and PAK to spines to regulate postsynaptic structure and interacts with NMDA receptor and metabotropic glutamate receptor complexes. 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.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: SHANK3 (human) mapping to 22q13.3; Shank3 (mouse) mapping to 15 E3.

SOURCE

Shank 3 (H-160) is a rabbit polyclonal antibody raised against amino acids 1431-1590 mapping near the C-terminus of isoform 2 of Shank 3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Shank 3 (H-160) is recommended for detection of Shank 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Shank 3 siRNA (h): sc-42200, Shank 3 siRNA (m): sc-42201, Shank 3 shRNA Plasmid (h): sc-42200-SH, Shank 3 shRNA Plasmid (m): sc-42201-SH, Shank 3 shRNA (h) Lentiviral Particles: sc-42200-V and Shank 3 shRNA (m) Lentiviral Particles: sc-42201-V.

Molecular Weight of Shank 3: 180 kDa

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS


STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try Shank 3 (C-4): sc-377088 or Shank 3 (E-1): sc-377470, our highly recommended monoclonal alternatives to Shank 3 (H-160).