

piccolo (C-18): sc-18569

BACKGROUND

Piccolo is 1 component of the presynaptic cytomatrix. Bassoon is a large protein which is also found in the presynaptic compartments of rat brain synapses. Bassoon, along with piccolo, is part of the ensemble of presynaptic proteins that are involved in orchestrating events at the nerve terminal. Bassoon is found in axon terminals of hippocampal neurons where it is highly concentrated in the vicinity of the active zone. Piccolo has a similar distribution and colocalizes with bassoon in cultured hippocampal cells. Piccolo zinc fingers interact with the dual prenylated Rab 3A and VAMP2/Synaptobrevin II receptor PRA. Bassoon may be involved in cytomatrix organization at the site of neurotransmitter release. The gene which encodes bassoon maps to human chromosome 3p21.31. The gene which encodes piccolo maps to human chromosome 7q21.11.

REFERENCES

1. Ishikawa, K., et al. 1997. Prediction of the coding sequences of unidentified human genes. VIII. 78 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 4: 307-313.
2. tom Dieck, S., et al. 1998. Bassoon, a novel zinc-finger CAG/glutamine-repeat protein selectively localized at the active zone of presynaptic nerve terminals. J. Cell Biol. 142: 499-509.
3. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. IX. The complete sequences of 100 new cDNA clones from brain which can code for large proteins *in vitro*. DNA Res. 5: 31-39.
4. Hashida, H., et al. 1998. Cloning and mapping of ZNF231, a novel brain-specific gene encoding neuronal double zinc finger protein whose expression is enhanced in a neurodegenerative disorder, multiple system atrophy (MSA). Genomics 54: 50-58.
5. Winter, C., et al. 1999. The presynaptic cytomatrix protein bassoon: sequence and chromosomal localization of the human BSN gene. Genomics 57: 389-397.
6. Fenster, S.D., et al. 2000. Piccolo, a presynaptic zinc finger protein structurally related to bassoon. Neuron 25: 203-214.

CHROMOSOMAL LOCATION

Genetic locus: PCLO (human) mapping to 7q21.11; Pclo (mouse) mapping to 5 A1.

SOURCE

piccolo (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of piccolo of human origin.

STORAGE

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

PROTOCOLS

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

PRODUCT

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

Blocking peptide available for competition studies, sc-18569 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

piccolo (C-18) is recommended for detection of piccolo of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

piccolo (C-18) is also recommended for detection of piccolo in additional species, including equine, porcine and avian.

Suitable for use as control antibody for piccolo siRNA (h): sc-42166, piccolo siRNA (m): sc-42167, piccolo shRNA Plasmid (h): sc-42166-SH, piccolo shRNA Plasmid (m): sc-42167-SH, piccolo shRNA (h) Lentiviral Particles: sc-42166-V and piccolo shRNA (m) Lentiviral Particles: sc-42167-V.

Molecular Weight of piccolo: 420 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Tang, V.W. 2006. Proteomic and bioinformatic analysis of epithelial tight junction reveals an unexpected cluster of synaptic molecules. Biol. Direct 1: 37.

RESEARCH USE

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