

basoon (SAP7F407): sc-58509

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 rab3A and VAMP2/Synapto-brevin II receptor PRA1. 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: BSN (human) mapping to 3p21.31; Bsn (mouse) mapping to 9 F2.

SOURCE

Bassoon (SAP7F407) is a mouse monoclonal antibody raised against recombinant bassoon of rat origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

basoon (SAP7F407) is recommended for detection of bassoon 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

basoon (SAP7F407) is also recommended for detection of bassoon in additional species, including bovine and canine.

Suitable for use as control antibody for bassoon siRNA (h): sc-42168, bassoon siRNA (m): sc-42169, bassoon shRNA Plasmid (h): sc-42168-SH, bassoon shRNA Plasmid (m): sc-42169-SH, bassoon shRNA (h) Lentiviral Particles: sc-42168-V and bassoon shRNA (m) Lentiviral Particles: sc-42169-V.

Molecular Weight of Bassoon: 420 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Yang, A.J.T., et al. 2022. Chronic AMPK activation reduces the expression and alters distribution of synaptic proteins in neuronal SH-SY5Y cells. Cells 11: 2354.
2. De Rosa, R., et al. 2022. Loss of CDKL5 causes synaptic GABAergic defects that can be restored with the neuroactive steroid pregnenolone-methyl-ether. Int. J. Mol. Sci. 24: 68.

RESEARCH USE

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

PROTOCOLS

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