SANTA CRUZ BIOTECHNOLOGY, INC.

Synaptotagmin XI (H-7): sc-515632

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Synaptotagmins are a large family of synaptic vesicle type III integral membrane proteins that function as regulators of both exocytosis and endocytosis and are involved in neurotransmitter secretion from small secretory vesicles. Synaptotagmins consists of highly conserved C2 domains, which most have a capacity for calcium binding. Calcium-dependent Synaptotagmins act as calcium sensors during vesicular trafficking. Synaptotagmin XI, also known as SYT11 (Synaptotagmin-11), is a 431 amino acid protein that localizes to the membrane and is expressed ubiquitously with highest expression in brain and lung. Unlike other Synaptotagmin proteins, Synaptotagmin XI is suggested to be calcium-independent due to a single point mutation in one of its C2 domains. Synaptotagmin XI interacts with the ubiquitin-E3-ligase Parkin (a juvenile Parkinson's disease gene product), which causes the polyubiquitination and subsequent degradation of Synaptotagmin XI by the proteasome complex. Defects in the gene encoding Synaptotagmin XI are implicated in a number of neurological disorders, including schizophrenia and Parkinson's disease.

CHROMOSOMAL LOCATION

Genetic locus: SYT11 (human) mapping to 1q22; Syt11 (mouse) mapping to 3 F1.

SOURCE

Synaptotagmin XI (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-20 at the N-terminus of Synaptotagmin XI of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Synaptotagmin XI (H-7) is available conjugated to agarose (sc-515632 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515632 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515632 PE), fluorescein (sc-515632 FITC), Alexa Fluor® 488 (sc-515632 AF488), Alexa Fluor® 546 (sc-515632 AF546), Alexa Fluor® 594 (sc-515632 AF594) or Alexa Fluor® 647 (sc-515632 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515632 AF680) or Alexa Fluor® 790 (sc-515632 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515632 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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 for detailed protocols and support products.

APPLICATIONS

Synaptotagmin XI (H-7) is recommended for detection of Synaptotagmin XI of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 Synaptotagmin XI siRNA (h): sc-88813, Synaptotagmin XI siRNA (m): sc-153977, Synaptotagmin XI siRNA (r): sc-270197, Synaptotagmin XI shRNA Plasmid (h): sc-88813-SH, Synaptotagmin XI shRNA Plasmid (m): sc-153977-SH, Synaptotagmin XI shRNA Plasmid (r): sc-270197-SH, Synaptotagmin XI shRNA (h) Lentiviral Particles: sc-88813-V, Synaptotagmin XI shRNA (m) Lentiviral Particles: sc-153977-V and Synaptotagmin XI shRNA (r) Lentiviral Particles: sc-270197-V.

Molecular Weight of Synaptotagmin XI monomer: 64 kDa.

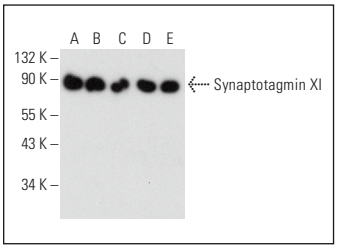
Molecular Weight of Synaptotagmin XI homodimer: 110 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, Neuro-2A whole cell lysate: sc-364185 or C6 whole cell lysate: sc-364373.

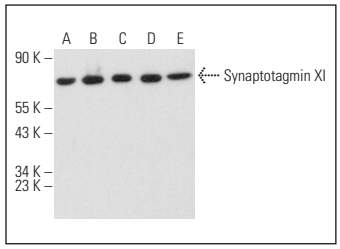
RECOMMENDED SUPPORT REAGENTS

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.

DATA



Synaptotagmin XI (H-7): sc-515632. Western blot analysis of Synaptotagmin XI expression in Neuro-2A (**A**), C6 (**B**), BC_3H1 (**C**), EOC 20 (**D**) and Sol8 (**E**) whole cell lysates.



Synaptotagmin XI (H-7): sc-515632. Western blot analysis of Synaptotagmin XI expression in IMR-32 (**A**), U-87 MG (**B**), BC_3H1 (**C**), Neuro-2A (**D**) and C6 (**E**) whole cell lysates.

RESEARCH USE

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