**BACKGROUND**

The RAPSN gene locus is located on chromosome 11p11.2 and encodes a peripheral membrane protein. Rapsyn (receptor-associated protein of the synapse) is expressed in the postsynaptic membrane of skeletal muscle. Rapsyn is required for the clustering of nicotinic acetylcholine receptors (nAChR). Rapsyn self-associates through at least two of its seven tetra-tripeptide repeats (TPRs). Rapsyn interacts with the large intracellular domain of the nAChR α subunit through the hydrophobic surface of the coiled-coil domain. Rapsyn modifies trafficking of AChR within the cell. Expression is essential for agrin-induced AChR clustering. Overexpression inhibits agrin-induced AChR clustering pathway. Absence of rapsyn causes deficits in the formation of postsynaptic specializations at neuromuscular synapse, which increases axonal branching and motoneuron survival. Rapsyn plays a role in selective targeting of newly synthesized intracellular AChR to postsynaptic membrane.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: RAPSN (human) mapping to 11p11.2; Rapsn (mouse) mapping to 2 E1.

**SOURCE**

rapsyn (1234) is a mouse monoclonal antibody raised against purified rapsyn from Torpedo californica electric organ postsynaptic membrane.

**PRODUCT**

Each vial contains 100 µg IgG1 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**

rapsyn (1234) is recommended for detection of rapsyn of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for rapsyn siRNA (h): sc-42206, rapsyn siRNA (m): sc-42207, rapsyn shRNA Plasmid (h): sc-42206-SH, rapsyn shRNA Plasmid (m): sc-42207-SH, rapsyn shRNA (h) Lentiviral Particles: sc-42206-V and rapsyn shRNA (m) Lentiviral Particles: sc-42207-V.

Molecular Weight of rapsyn: 43 kDa.

Positive Controls: A-673 cell lysate: sc-2414, mouse skeletal muscle extract: sc-364250 or Hs 732.Sk/Mu whole cell lysate: sc-364362.

**DATA**

rapsyn (1234): sc-58585. Western blot analysis of rapsyn expression in A-673 (A) and HeLa (B) whole cell lysates.

rapsyn (1234): sc-58585. Western blot analysis of rapsyn expression in Hs 732.Sk/Mu whole cell lysate (A) and mouse skeletal muscle tissue extract (B).

**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.