

SYT1

Reactivity: Human Mouse Rat

Tested applications: WB IHC IF

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:200 IF 1:50 - 1:200

Calculated MW: 48kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human SYT1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

SYT1; DKFZp781D2042; P65; SVP65; SYT ;

Catalog #: A0992

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 6857

Isotype: IgG

Swiss Prot: P21579

Purity: Affinity purification

For research use only.

Background:

Synaptotagmin 1 (SYT1) is an integral membrane protein found in synaptic vesicles thought to play a role in vesicle trafficking and exocytosis (1). Individual SYT1 proteins are composed of an amino-terminal transmembrane region, a central linker region and a pair of carboxy-terminal C2 domains responsible for binding Ca^{2+} (2). The C2 domains appear to be functionally distinct, with the C2A domain responsible for regulating synaptic vesicle fusion in a calcium-dependent manner during exocytosis while the C2B domain allows for interaction between adjacent SYT1 proteins (3). Because synaptotagmin 1 binds calcium and is found in synaptic vesicles, this integral membrane protein is thought to act as a calcium sensor in fast synaptic vesicle exocytosis. Evidence suggests possible roles in vesicle-mediated endocytosis and glucose-induced insulin secretion as well (4,5). SYT1 binds several different SNARE proteins during calcium-mediated vesicle endocytosis and an association between SYT1 and the SNARE protein SNAP-25 is thought to be a key element in vesicle-mediated exocytosis (6).

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