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Rabbit Anti-Tomosyn/STXBP5 antibody

SL12126R

Product Name	Tomosyn/STXBP5
Chinese Name	突触融合蛋白 Binding protein5 抗体
Alias	FLJ30922; Lethal(2) giant larvae protein homolog 3; LGL3; LLGL3; MGC141942; MGC141968; Nbla04300; STXBP5; Syntaxin binding protein 5; Syntaxin-binding protein 5; Tomosyn 1; STXB5_HUMAN.
Research Area	Cell biology Neurobiology Apoptosis Cyclin Binding protein
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted: Human, Mouse, Rat, Chicken, Dog, Pig, Cow, Rabbit, Sheep,)
Applications	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	127kDa
Cellular localization	cytoplasmic The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human Tomosyn/STXBP5: 235-380/1151
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

WD-repeats are motifs that are found in a variety of proteins and are characterized by a conserved core of 40-60 amino acids that commonly form a tertiary propeller structure. While proteins that contain WD-repeats participate in a wide range of cellular functions, they are generally involved in regulatory mechanisms concerning chromatin assembly, cell cycle control, signal transduction, RNA processing, apoptosis and vesicular trafficking. Tomosyn, also known as STXBP5 (syntaxin binding protein 5), LLGL3 or LGL3, is a 1,151 amino acid protein that localizes to the cytoplasm, as well as to the cell junction, secretory vesicles and to the peripheral membrane and contains one v-SNARE coiled-coil homology domain and 14 WD repeats. Interacting with Syntaxin 1 and Syntaxin 1B, Tomosyn functions as a regulator of neurotransmitter release and calcium-dependent exocytosis. Additionally, Tomosyn inhibits membrane fusion and may play a role in the assembly of SNARE complexes between transport vesicles and the plasma membrane. Multiple isoforms of Tomosyn exist due to alternative splicing events.

Function:
Tomosyn plays a regulatory role in calcium-dependent exocytosis and neurotransmitter release by inhibiting the assembly of trans-SNARE complexes between transport vesicles and the plasma membrane, via the displacement of munc18 from syntaxin-1. There are three splice variants of tomosyn designated m-tomosyn, b-tomosyn and s-tomosyn. Although b-tomosyn is ubiquitously expressed, s-tomosyn and m-tomosyn are expressed primarily in brain.

Product Detail

Subunit:
Interacts with STX1A and STX1B via its v-SNARE homology domain. Part of a complex that contains STX1, STXBP5, SNAP25 and SYT1. Part of a complex that contains STXBP5, STX4A and SNAP23.

Subcellular Location:
Cytoplasm. Cell membrane; Peripheral membrane protein. Cytoplasmic vesicle membrane; Peripheral membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle. Cell junction, synapse. Note=Cytoplasmic, and associated with vesicular membranes and the plasma membrane. Detected at synapses and on synaptic vesicles.

Similarity:
Belongs to the WD repeat L(2)GL family.
Contains 1 v-SNARE coiled-coil homology domain.
Contains 14 WD repeats.

SWISS:
Q5T5C0

Gene ID:
134957

Database links:

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Entrez Gene: 134957 Human

Entrez Gene: 78808 Mouse

Entrez Gene: 81022 Rat

Omim: 604586 Human

SwissProt: Q5T5C0 Human

SwissProt: Q8K400 Mouse

SwissProt: Q9WU70 Rat

Unigene: 93534 Human

Unigene: 331751 Mouse

Unigene: 96029 Rat