

Syntaphilin Antibody

Syntaphilin (IN): SNPH

CATALOG No.:4635

BACKGROUND:

Syntaphilin was initially identified in a yeast two-hybrid screen with the carboxy terminal region of Syntaxin-1 as bait (1). Syntaxin-1 is a key component of the synaptic vesicle docking machinery that forms the SNARE complex with synaptobrevin and SNAP-25 (2). Syntaphilin competes with SNAP-25 for binding to syntaxin-1 and inhibits the formation of the SNARE complex, thereby potentially regulating synaptic vesicle exocytosis (1). Syntaphilin also binds dynamin-1 and inhibits dynamin-dependent endocytosis (3). Mice lacking syntaphilin show an increased level of mitochondrial motility and a reduced density of axonal mitochondria. This correlates with an enhanced short-term facilitation and significant impairments in motor ability, suggesting syntaphilin plays a major role in presynaptic function (4). Despite its predicted molecular weight, Syntaphilin usually migrates at higher molecular weight in SDS-PAGE. Multiple isoforms are known to exist.

SOURCE:

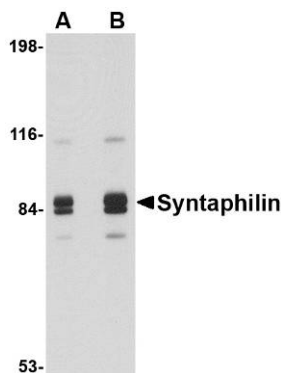
Rabbit polyclonal Syntaphilin antibody was raised against a 16 amino acid peptide from near the center of human Syntaphilin (GenBank accession no. O15079).

APPLICATIONS:

Syntaphilin antibody can be used for detection of Syntaphilin by Western blot at 1 – 2 µg/ml. (Optimal dilution should be determined by user.) Rat brain tissue lysate can be used as positive control. Syntaphilin antibody is human, mouse and rat reactive. **For research use only.**

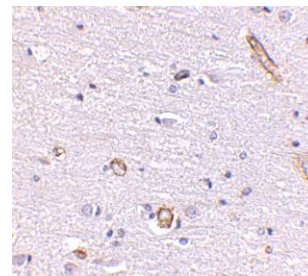
STORAGE:

Syntaphilin antibody is supplied as immunoaffinity purified IgG in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.



Western blot analysis of Syntaphilin in rat brain tissue lysate with Syntaphilin antibody at (A) 1 and (B) 2 µg/ml.

Immunohistochemistry of Syntaphilin in human brain with Syntaphilin antibody at 5 µg/ml.



RELATED PRODUCTS:

Blocking Peptide, Catalog No. **4635P**.
Rat Brain Tissue Lysate, Catalog No. **1463**.
Syntaphilin Antibody (NT), Catalog No. **4617**.

REFERENCES:

1. Lao G, Scheuss V, Gerwin CM, et al. Syntaphilin: a syntaxin-1 clamp that controls SNARE assembly. *Neuron* 2000; 25:191-201.
2. Sorensen JB. SNARE complexes prepare for membrane fusion. *Trends Neurosci.* 2005; 28:453-5.
3. Das S, Gerwin C, and Sheng ZH. Syntaphilin binds to dynamin-1 and inhibits dynamin-dependent endocytosis. *J. Biol. Chem.* 2003; 278:41221-6.
4. Kang J-S, Tian J-H, Pan P-Y, et al. Docking of axonal mitochondria by syntaphilin controls their mobility and affects short-term facilitation. *Cell* 2008; 132:137-148. (08-01D)