

# Synaptotagmin X (P-13): sc-169466

## BACKGROUND

Synaptotagmin X, also known as SytX or synaptotagmin-10 (SYT10), is a 523 amino acid single-pass synaptic vesicle membrane protein that belongs to the synaptotagmin family and contains 2 C2 domains. Three calcium ions are bound to Synaptotagmin X per subunit using the C2 domains. While it may be involved in calcium-dependent exocytosis of secretory vesicles through calcium and phospholipid binding to the C2 domain, Synaptotagmin X may also serve as calcium sensors in the process of vesicular trafficking and exocytosis. Synaptotagmin X exists as either a homodimer or heterodimer and is only expressed in pancreas, lung and kidney. The gene that encodes Synaptotagmin X contains 64,407 bases and maps to human chromosome 12p11.1. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

## REFERENCES

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3. Delgado Carrasco, J., et al. 2001. Achondrogenesis type II-hypochondrogenesis: radiological features. Case report. *An. Esp. Pediatr.* 55: 553-557.
4. Yokoyama, T., et al. 2003. A case of Kniest dysplasia with retinal detachment and the mutation analysis. *Am. J. Ophthalmol.* 136: 1186-1188.
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6. Forzano, F., et al. 2007. A familial case of achondrogenesis type II caused by a dominant COL2A1 mutation and "patchy" expression in the mosaic father. *Am. J. Med. Genet. A* 143A: 2815-2820.
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## CHROMOSOMAL LOCATION

Genetic locus: SYT10 (human) mapping to 12p11.1; Syt10 (mouse) mapping to 15 E3.

## SOURCE

Synaptotagmin X (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Synaptotagmin X of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-169466 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Synaptotagmin X (P-13) is recommended for detection of Synaptotagmin X of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other Synaptotagmin family members.

Synaptotagmin X (P-13) is also recommended for detection of Synaptotagmin X in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Synaptotagmin X siRNA (h): sc-96219, Synaptotagmin X siRNA (m): sc-153976, Synaptotagmin X shRNA Plasmid (h): sc-96219-SH, Synaptotagmin X shRNA Plasmid (m): sc-153976-SH, Synaptotagmin X shRNA (h) Lentiviral Particles: sc-96219-V and Synaptotagmin X shRNA (m) Lentiviral Particles: sc-153976-V.

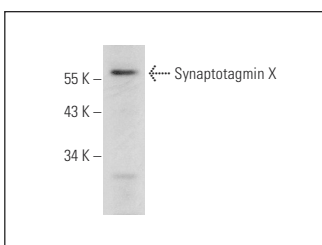
Molecular Weight of Synaptotagmin X: 59 kDa.

Positive Controls: human kidney extract: sc-363764.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Synaptotagmin X (P-13): sc-169466. Western blot analysis of Synaptotagmin X expression in human kidney tissue extract.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

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