

Product Information

Anti-Syntaxin antibody, Mouse monoclonal Clone HPC-1, purified from hybridoma cell culture

Product Number **SAB4200841**

Product Description

Monoclonal Anti-Syntaxin antibody (mouse IgG1 isotype) is derived from the HPC-1 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with a synaptosomal plasma-membrane fraction from adult rat hippocampus.¹ The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2). The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Syntaxin antibody specifically recognizes membrane protein syntaxin, expressed predominantly in neuronal tissues.^{2,3} The antibody reacts with syntaxin from human, mouse and rat origin. The antibody has also been used to isolate syntaxin cDNA clones by screening a λ gt 11 library from rat hippocampus.³ The antibody may be used in various immunochemical techniques including Immunoblotting (~35 kDa), Immunohistochemistry⁴ and Immunofluorescence⁵.

Syntaxins are a family of membrane-integrated proteins that are instrumental in exocytosis of vesicles.⁶ The syntaxin family consists of 15 genes in mammals and 7 in yeast, and there are syntaxin-like sequences in all eukaryotes examined.⁷ All mammalian syntaxins, with the exception of syntaxin 11, are transmembrane proteins anchored by their C-terminal tails.⁷ Syntaxin-1(also known as HPC-1 antigen or Stx1),⁸⁻⁹ a 35 kDa molecule with carboxyl-terminal membrane anchor, is a synaptic protein identified by its ability to interact with the synaptic vesicle protein synaptotagmin. Syntaxin-1 protein is an essential component of the synaptic vesicle soluble N-ethylmaleimide-sensitive factor attachment protein receptor (SNARE) complex and is essential for neurotransmission.¹⁰ It forms a four-helical bundle complex with proteins SNAP-25 and VAMP2 that drives fusion of vesicular and plasma membranes.^{6,11}

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.
Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8°C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.25-0.5 μ g/mL is recommended using human neuroblastoma SHSY5Y cell lysate.

Note: In order to obtain best results in different techniques and preparations it is recommended to determine optimal working concentration by titration test.

References

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