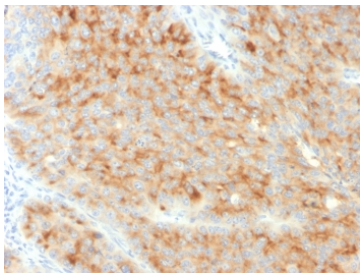
Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551 / SYP Protein Microarray Validated Antibody [clone SYP/3551] (V7577)

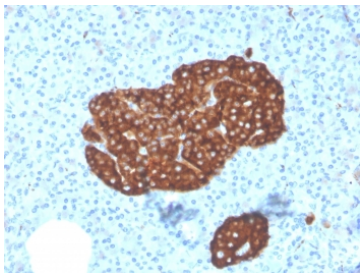
Catalog No.	Formulation	Size
V7577-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7577-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7577SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7577IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

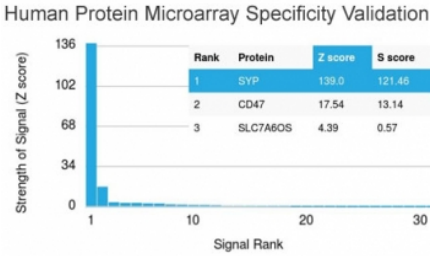
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SYP/3551
Purity	Protein G affinity chromatography
UniProt	P08247
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Synaptophysin antibody is available for research use only.



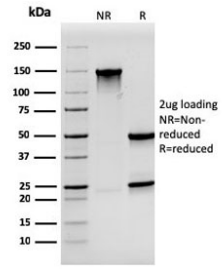
Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551. Immunohistochemistry analysis of FFPE human pancreatic carcinoma using Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551. The recombinant monoclonal antibody clone SYP/3551 produces cytoplasmic staining in tumor cells consistent with Synaptophysin / SYP expression in neuroendocrine differentiated cells. Synaptophysin is a synaptic vesicle membrane glycoprotein widely used as a marker of neuroendocrine differentiation, and the observed cytoplasmic immunoreactivity in pancreatic carcinoma cells aligns with the known localization of SYP within synaptic vesicle membranes. Protein microarray validation of clone SYP/3551 supports selective target recognition, helping confirm specific detection of Synaptophysin protein in immunohistochemistry analysis of formalin-fixed paraffin-embedded tissues.



IHC staining of FFPE human pancreas with Synaptophysin antibody (clone SYP/3551). HIER: boil tissue sections in pH6, 10mM citrate buffer, for 10-20 min and allow to cool before testing.



Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551. Protein microarray specificity validation using the HuProt(TM) human protein microarray platform containing more than 19,000 full-length human proteins demonstrates highly selective recognition of the Synaptophysin / SYP target by monoclonal antibody clone SYP/3551. Signal ranking analysis shows SYP as the top-ranked protein with a strong Z-score signal compared with other proteins on the array, indicating that the antibody preferentially binds Synaptophysin. Secondary proteins such as CD47 and SLC7A6 show substantially lower signal intensity, further supporting the high specificity of this protein microarray validated antibody. In HuProt(TM) microarray analysis, the Z-score represents the strength of antibody binding signal relative to the overall signal distribution on the array, expressed as standard deviations above the mean. Targets are ranked according to their Z-scores, and the S-score represents the difference between consecutive Z-scores in the ranked list. The S-score therefore provides an additional measure of antibody specificity for the intended target protein. The strong enrichment of the SYP signal and the large separation from subsequent ranked proteins demonstrate the specificity of Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551 for the Synaptophysin protein in large-scale protein microarray screening.



SDS-PAGE analysis of purified, BSA-free Synaptophysin antibody (clone SYP/3551) as confirmation of integrity and purity.

Description

Synaptophysin (SYP) is an integral membrane glycoprotein of synaptic vesicles widely expressed in neurons and neuroendocrine cells where it participates in synaptic vesicle formation, trafficking, and neurotransmitter release. Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551 is developed for specific detection of the Synaptophysin protein and incorporates protein microarray validation to support antibody target selectivity. Synaptophysin is one of the most widely used molecular markers of neuronal and neuroendocrine differentiation, and antibodies

recognizing SYP protein are commonly used to identify cells containing synaptic vesicles characteristic of neurons and neuroendocrine lineages.

Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551 recognizes the Synaptophysin protein, also referred to as SYP antibody or synaptic vesicle glycoprotein antibody in the literature. Synaptophysin is localized primarily to the membranes of presynaptic vesicles where it contributes to vesicle organization and synaptic transmission processes. Because of this restricted subcellular localization and strong expression in neuronal and neuroendocrine cells, Synaptophysin has become an important marker used to study neuronal differentiation, synaptic vesicle biology, and neuroendocrine tumor cell populations.

Protein microarray validation provides a powerful strategy for evaluating antibody specificity by testing antibody binding against large panels of recombinant proteins. In these experiments, antibodies are screened on protein microarrays containing hundreds or thousands of distinct human proteins, allowing researchers to assess target recognition and potential cross-reactivity in a high throughput format. The protein microarray validated Synaptophysin antibody clone SYP/3551 therefore benefits from large-scale specificity screening designed to confirm selective binding to the Synaptophysin protein while reducing the likelihood of unintended recognition of unrelated proteins.

Large-scale protein microarray screening has become an increasingly important tool for antibody validation because it allows simultaneous assessment of antibody binding across broad protein panels. This approach complements traditional antibody characterization methods by providing an expanded evaluation of antibody selectivity. Protein microarray validated antibodies therefore offer an additional layer of confidence for researchers seeking reagents with strong target specificity for detecting proteins such as Synaptophysin in experimental systems.

Synaptophysin protein expression is strongly associated with neuronal tissues including brain and peripheral nervous system structures, as well as neuroendocrine cells in organs such as pancreas, lung, and gastrointestinal tract. Because of this characteristic expression pattern, Synaptophysin antibodies are widely used as markers for neuronal lineage identification and neuroendocrine differentiation in biological research. Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551 therefore provides a monoclonal antibody reagent supported by protein microarray validation for studies examining synaptic vesicle proteins, neuronal cell markers, and neuroendocrine protein expression.

Application Notes

Optimal dilution of the Synaptophysin Antibody Protein Microarray Validated Clone SYP/3551 should be determined by the researcher.
1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

A recombinant human Synaptophysin protein fragment within amino acids 224-313 was used as the immunogen for the Synaptophysin antibody.

Storage

Store the Synaptophysin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

SYP antibody, Synaptophysin antibody, Synaptic vesicle glycoprotein antibody, Major synaptic vesicle protein p38 antibody