

CONFIRM anti-Synaptophysin (SP11) Rabbit Monoclonal Primary Antibody

REF 790-4407

05479304001

IVD  50

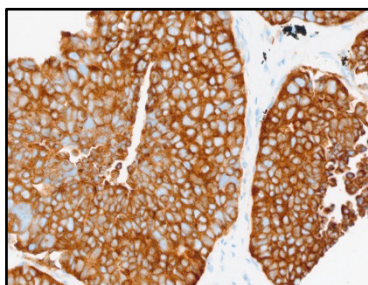


Figure 1. CONFIRM anti-Synaptophysin (SP11) antibody staining in small cell lung carcinoma.

INTENDED USE

CONFIRM anti-Synaptophysin (SP11) Rabbit Monoclonal Primary Antibody is intended for laboratory use in the qualitative immunohistochemical detection of synaptophysin by light microscopy in sections of formalin-fixed, paraffin-embedded tissue stained on a BenchMark IHC/ISH instrument.

This product should be interpreted by a qualified pathologist in conjunction with histological examination, relevant clinical information, and proper controls. This antibody is intended for in vitro diagnostic (IVD) use.

SUMMARY AND EXPLANATION

Synaptophysin is a 38 kilodalton integral membrane glycoprotein expressed in presynaptic vesicles of neurons.¹ Synaptophysin is a general marker for neuroendocrine cells, as well as the tumors that are derived from them.² Neuroendocrine tumors originate in specialized cells of the body's neuroendocrine system and can arise in various anatomical locations.³ The diagnosis of a suspected neuroendocrine tumor begins by confirming neuroendocrine differentiation, using an immunohistochemistry (IHC) based panel of general neuroendocrine markers.^{2,4} Clinical guidelines and best practice articles recommend the use of synaptophysin IHC as part of a panel with other neuroendocrine markers, to aid in the diagnosis of neuroendocrine tumors.^{2,5,6,7} The detection of synaptophysin by IHC using CONFIRM anti-Synaptophysin (SP11) Rabbit Monoclonal Primary Antibody (CONFIRM anti-Synaptophysin (SP11) antibody) may be used to aid in the diagnosis of neuroendocrine tumors.

PRINCIPLE OF THE PROCEDURE

CONFIRM anti-Synaptophysin (SP11) antibody binds to the Synaptophysin glycoprotein in formalin-fixed, paraffin-embedded (FFPE) tissue sections. This antibody can be visualized using *ultraView* Universal DAB Detection Kit (Cat. No. 760-500 / 05269806001) or *OptiView* DAB IHC Detection Kit (Cat. No. 760-700 / 06396500001). Refer to the respective method sheet for further information.

MATERIAL PROVIDED

CONFIRM anti-Synaptophysin (SP11) antibody contains sufficient reagent for 50 tests. One 5 mL dispenser of CONFIRM anti-Synaptophysin (SP11) antibody contains approximately 0.3 µg of a rabbit monoclonal antibody.

The antibody is diluted in phosphate buffer with carrier protein and 0.05% ProClin 300, a preservative.

Specific antibody concentration is approximately 0.06 µg/mL. There is no known non-specific antibody reactivity observed in this product.

CONFIRM anti-Synaptophysin (SP11) antibody is a recombinant rabbit monoclonal antibody produced as purified cell culture supernatant.

Refer to the appropriate VENTANA detection kit method sheet for detailed descriptions of: Principle of the Procedure, Material and Methods, Specimen Collection and Preparation for Analysis, Quality Control Procedures, Troubleshooting, Interpretation of Results, and Limitations.

MATERIALS REQUIRED BUT NOT PROVIDED

Staining reagents, such as VENTANA detection kits and ancillary components, including negative and positive tissue control slides, are not provided.

Not all products listed in the method sheet may be available in all geographies. Consult your local support representative.

The following reagents and materials may be required for staining but are not provided:

1. Recommended control tissue
2. Microscope slides, positively charged
3. Rabbit Monoclonal Negative Control Ig (Cat. No. 790-4795 / 06683380001)
4. *ultraView* Universal DAB Detection Kit (Cat. No. 760-500 / 05269806001)
5. *OptiView* DAB IHC Detection Kit (Cat. No. 760-700 / 06396500001)
6. EZ Prep Concentrate (10X) (Cat. No. 950-102 / 05279771001)
7. Reaction Buffer Concentrate (10X) (Cat. No. 950-300 / 05353955001)
8. LCS (Predilute) (Cat. No. 650-010 / 05264839001)
9. ULTRA LCS (Predilute) (Cat. No. 650-210 / 05424534001)
10. Cell Conditioning Solution (CC1) (Cat. No. 950-124 / 05279801001)
11. ULTRA Cell Conditioning Solution (ULTRA CC1) (Cat. No. 950-224 / 05424569001)
12. Hematoxylin II (Cat. No. 790-2208 / 05277965001)
13. Bluing Reagent (Cat. No. 760-2037 / 05266769001)
14. General purpose laboratory equipment
15. BenchMark IHC/ISH instrument

STORAGE AND STABILITY

Upon receipt and when not in use, store at 2-8°C. Do not freeze.

To ensure proper reagent delivery and the stability of the antibody, replace the dispenser cap after every use and immediately place the dispenser in the refrigerator in an upright position.

Every antibody dispenser expiration dated. When properly stored, the reagent is stable to the date indicated on the label. Do not use reagent beyond the expiration date.

SPECIMEN PREPARATION

Routinely processed FFPE tissues are suitable for use with this primary antibody when used with VENTANA detection kits and BenchMark IHC/ISH instruments. The recommended tissue fixative is 10% neutral buffered formalin.⁸ Sections should be cut at approximately 4 µm in thickness and mounted on positively charged slides. Slides should be stained immediately, as antigenicity of cut tissue sections may diminish over time.

It is recommended that positive and negative controls be run simultaneously with unknown specimens.


WARNINGS AND PRECAUTIONS

1. For in vitro diagnostic (IVD) use.
2. For professional use only.
3. **CAUTION:** In the United States, Federal law restricts this device to sale by or on the order of a physician. (Rx Only)
4. Do not use beyond the specified number of tests.
5. This product contains 2% or less bovine serum which is used in the manufacture of the antibody.
6. ProClin 300 solution is used as a preservative in this reagent. It is classified as an irritant and may cause sensitization through skin contact. Take reasonable precautions when handling. Avoid contact of reagents with eyes, skin, and mucous membranes. Use protective clothing and gloves.
7. Positively charged slides may be susceptible to environmental stresses resulting in inappropriate staining. Ask your Roche representative for more information on how to use these types of slides.
8. Materials of human or animal origin should be handled as biohazardous materials and disposed of with proper precautions. In the event of exposure, the health directives of the responsible authorities should be followed.^{9,10}
9. Avoid contact of reagents with eyes and mucous membranes. If reagents come in contact with sensitive areas, wash with copious amounts of water.
10. Avoid microbial contamination of reagents as it may cause incorrect results.
11. For further information on the use of this device, refer to the BenchMark IHC/ISH instrument User Guide, and instructions for use of all necessary components located at dialog.roche.com.

12. Consult local and/or state authorities with regard to recommended method of disposal.
13. Product safety labeling primarily follows EU GHS guidance. Safety data sheet available for professional user on request.
14. To report suspected serious incidents related to this device, contact the local Roche representative and the competent authority of the Member State or Country in which the user is established.

This product contains components classified as follows in accordance with the Regulation (EC) No. 1272/2008:

Table 1. Hazard information.

Hazard	Code	Statement
	H317	May cause an allergic skin reaction.
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P272	Contaminated work clothing should not be allowed out of the workplace.
	P280	Wear protective gloves.
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P362 + P364	Take off contaminated clothing and wash it before reuse.
	P501	Dispose of contents/ container to an approved waste disposal plant.

This product contains CAS # 55965-84-9, reaction mass of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1).

STAINING PROCEDURE

VENTANA primary antibodies have been developed for use on BenchMark IHC/ISH instruments in combination with VENTANA detection kits and accessories. Refer to the tables below for recommended staining protocols.

This antibody has been optimized for specific incubation times but the user must validate results obtained with this reagent.

The parameters for the automated procedures can be displayed, printed and edited according to the procedure in the instrument User Guide. Refer to the appropriate VENTANA detection kit method sheet for more details regarding immunohistochemistry staining procedures.

For more details on the proper use of this device, refer to the inline dispenser method sheet associated with P/N 790-4407.

Table 2. Recommended staining protocol for CONFIRM anti-Synaptophysin (SP11) antibody with *ultraView* Universal DAB Detection Kit on BenchMark IHC/ISH instruments.

Procedure Type	Method		
	GX	XT	ULTRA or ULTRA PLUS ^a
Deparaffinization	Selected	Selected	Selected
Cell Conditioning (Antigen Unmasking)	CC1, Standard	CC1, Standard	ULTRA CC1 52 minutes, 95 °C
Antibody (Primary)	32 minutes, 37 °C	72 minutes, 37 °C	72 minutes, 36 °C
Counterstain	Hematoxylin II, 4 minutes		
Post Counterstain	Bluing, 4 minutes		

^a Concordance was demonstrated between BenchMark ULTRA and BenchMark ULTRA PLUS instruments using representative assays.

Table 3. Recommended staining protocol for CONFIRM anti-Synaptophysin (SP11) antibody with OptiView DAB IHC Detection Kit BenchMark IHC/ISH instruments.

Procedure Type	Method		
	GX	XT	ULTRA or ULTRA PLUS ^a
Deparaffinization	Selected	Selected	Selected
Cell Conditioning (Antigen Unmasking)	CC1, 40 minutes	CC1, 40 minutes	ULTRA CC1 40 minutes, 100 °C
Pre-Primary Peroxidase Inhibitor	Selected	Selected	Selected
Antibody (Primary)	36 minutes, 37 °C	36 minutes, 37 °C	36 minutes, 36 °C
OptiView HQ Linker	8 minutes (default)		
OptiView HRP Multimer	8 minutes (default)		
Counterstain	Hematoxylin II, 4 minutes		
Post Counterstain	Bluing, 4 minutes		

^a Concordance was demonstrated between BenchMark ULTRA and BenchMark ULTRA PLUS instruments using representative assays.

Due to variation in tissue fixation and processing, as well as general lab instrument and environmental conditions, it may be necessary to increase or decrease the primary antibody incubation, cell conditioning or protease pretreatment based on individual specimens, detection used, and reader preference. For further information on fixation variables, refer to "Immunohistochemistry Principles and Advances."¹¹

NEGATIVE REAGENT CONTROL

In addition to staining with CONFIRM anti-Synaptophysin (SP11) antibody, a second slide should be stained with the appropriate negative control reagent.

POSITIVE TISSUE CONTROL

Optimal laboratory practice is to include a positive control section on the same slide as the test tissue. This helps identify any failures applying reagents to the slide. Tissue with weak positive staining is best suited for quality control. Control tissue may contain both positive and negative staining elements and serve as both the positive and negative control. Control tissue should be fresh autopsy, biopsy, or surgical specimen, prepared or fixed as soon as possible in a manner identical to test sections.

Known positive tissue controls should be utilized only for monitoring performance of reagents and instruments, not as an aid in determining specific diagnosis of test samples. If the positive tissue controls fail to demonstrate positive staining, results of the test specimen should be considered invalid.

An example of positive control tissues for this antibody is normal pancreas. Islet cells in normal pancreas should stain positively.

STAINING INTERPRETATION / EXPECTED RESULTS

The cellular staining pattern for CONFIRM anti-Synaptophysin (SP11) antibody is cytoplasmic.

SPECIFIC LIMITATIONS

This antibody may demonstrate some weak to moderate diffuse granular cytoplasmic staining in the acinar cells of the pancreas and adrenal cortical cells. Mild background staining or weak staining may be seen in endothelial cells, smooth muscle, and lymphocytes. Weak to moderate staining may be seen in tissues including, but not limited to, stomach, kidney, and thymus.

OptiView detection system is generally more sensitive than *ultraView* detection system. The user must validate the results obtained with this reagent and detection systems.

All assays might not be registered on every instrument. Please contact your local Roche representative for more information.

PERFORMANCE CHARACTERISTICS

ANALYTICAL PERFORMANCE

Staining tests for sensitivity, specificity, and precision were conducted and the results are listed below.

Sensitivity and Specificity

Table 4. Sensitivity/Specificity of CONFIRM anti-Synaptophysin (SP11) antibody was determined by testing FFPE normal tissues.

Tissue ^a	# positive / total cases	Tissue ^a	# positive / total cases
Cerebrum	4/4	Esophagus	0/3
Cerebellum	4/4	Stomach	1/4
Adrenal gland ^b	4/4	Small intestine	0/4
Ovary	0/4	Colon ^b	0/14
Pancreas ^b	19/19	Liver	0/4
Lymph node ^b	0/1	Salivary gland	0/4
Parathyroid gland ^c	3/3	Kidney ^e	4/4
Pituitary gland	3/3	Prostate ^b	0/4
Testis ^c	1/4	Bladder	0/3
Thyroid	0/4	Endometrium	0/4
Breast	0/4	Cervix	0/4
Spleen	0/3	Placenta ^c	1/3
Tonsil ^c	1/3	Skeletal muscle	0/3
Thymus ^d	3/3	Skin	0/4
Bone marrow	0/3	Nerve	3/3
Lung ^c	1/9	Mesothelium	0/3
Heart	0/3		

^a Staining of neuroendocrine cells and nerve was only used to determine positive status in cases of nerve or endocrine tissues

^b Tissues evaluated include normal and reactive / inflammation / hyperplasia

^c Rare to few cells staining

^d Some cells, including lymphocytes, staining

^e Distal tubules / collecting duct staining

Table 5. Sensitivity/Specificity of CONFIRM anti-Synaptophysin (SP11) antibody was determined by testing a variety of FFPE neoplastic tissues.

Pathology	# positive / total cases
Meningioma (Cerebrum)	0/1
Astrocytoma (Cerebrum)	1/1
Meningioma (Cerebellum)	0/2
Adenoma (Adrenal gland)	1/1
Adrenocortical carcinoma (Adrenal gland)	1/1
Squamous cell carcinoma (Head and neck)	0/1

Pathology	# positive / total cases
Adenocarcinoma (Head and neck)	0/1
Nasopharyngeal carcinoma (Head and neck)	0/1
Melanoma (Head and neck)	0/1
Granulosa cell tumor (Ovary)	0/1
Adenocarcinoma (Ovary) ^a	1/1
Endometrioid adenocarcinoma (Ovary)	0/1
Metastatic colon signet ring cell carcinoma (Ovary) ^a	1/1
Neuroendocrine neoplasm (Pancreas)	6/6
Neuroendocrine carcinoma (Pancreas)	6/6
Adenocarcinoma (Pancreas)	2/24
Paraganglioma (Pancreas)	1/1
Serous cystadenoma (Pancreas)	0/1
Serous cystadenocarcinoma (Pancreas)	0/1
Mucinous cystic neoplasm (Pancreas)	0/1
Adenosquamous carcinoma (Pancreas)	0/1
Mixed acinar-endocrine carcinoma (Pancreas)	2/2
Undifferentiated carcinoma (Pancreas)	0/1
Seminoma (Testis)	0/2
Adenoma (Thyroid)	0/3
Medullary carcinoma (Thyroid)	9/10
Papillary carcinoma (Thyroid)	0/68
Follicular carcinoma (Thyroid)	0/11
Invasive ductal carcinoma (Breast) ^a	1/3
Fibroadenoma (Breast)	0/2
Small cell carcinoma (Lung)	50/71
Metastatic adenocarcinoma (Lung)	0/1
Pleomorphic adenoma (Salivary gland)	0/1
Adenoid cystic carcinoma (Salivary gland)	0/1
Squamous cell carcinoma (Esophagus) ^a	1/3
Adenocarcinoma (Stomach) ^a	1/3
Adenoma (Small intestine)	0/1
Adenocarcinoma (Small intestine) ^a	1/1
Adenoma (Colon)	0/1
Adenocarcinoma (Colon) ^a	2/3
Adenocarcinoma (Rectum)	1/3
Hepatocellular carcinoma (Liver) ^a	1/4

Pathology	# positive / total cases
Metastatic colon adenocarcinoma (Liver)	0/1
Adenocarcinoma (Prostate) ^a	2/2
Adenocarcinoma (Uterus) ^a	1/2
Squamous Cell Carcinoma (Cervix)	0/2
Squamous cell carcinoma (Skin)	0/1
Hodgkin Lymphoma (Lymph node)	1/1
B-cell lymphoma, NOS (Lymph node)	0/1
Anaplastic large cell lymphoma (Lymph node)	0/1
Metastatic breast invasive ductal carcinoma (Lymph node)	0/1
Metastatic esophagus squamous cell carcinoma	0/1
Urothelial carcinoma (Bladder)	0/2
Osteosarcoma (Bone)	0/1
Chondrosarcoma (Bone)	0/1

^a Rare to few cells staining

Precision

Precision studies for CONFIRM anti-Synaptophysin (SP11) antibody were completed to demonstrate:

- Between lot precision of the antibody.
- Within run and between day precision on a BenchMark ULTRA instrument.
- Between instrument precision on the BenchMark GX, BenchMark XT, and BenchMark ULTRA instrument.
- Between platform precision between the BenchMark XT, BenchMark GX, and BenchMark ULTRA instrument.

All studies met their acceptance criteria.

Precision on the BenchMark ULTRA PLUS instrument was demonstrated using representative assays. Studies included Within-run Repeatability, Between-day and Between-run Intermediate Precision. All studies met their acceptance criteria.

CLINICAL PERFORMANCE

Clinical performance data relevant to the intended purpose of CONFIRM anti-Synaptophysin (SP11) antibody were assessed by systematic review of the literature. The data gathered support the use of the device in accordance with its intended purpose.

REFERENCES

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NOTE: A point (period/stop) is always used in this document as the decimal separator to mark the border between the integral and the fractional parts of a decimal numeral. Separators for thousands are not used.

The summary of safety and performance can be found here:

<https://ec.europa.eu/tools/eudamed>

Symbols

Ventana uses the following symbols and signs in addition to those listed in the ISO 15223-1 standard (for USA: see dialog.roche.com for definition of symbols used):



Global Trade Item Number



Unique Device Identification



Indicates the entity importing the medical device into the European Union

REVISION HISTORY

Rev	Updates
D	Updates to Intended Use, Summary and Explanation, Principle of the Procedure, Material Provided, Materials Required but Not Provided, Storage and Stability, Specimen Preparation, Warnings and Precautions, Staining Procedure, Negative Reagent Control, Positive Tissue Control, Specific Limitations, Analytical Performance, Clinical Performance, References, Symbols, Intellectual Property and Contact Information sections. Added BenchMark ULTRA PLUS instrument.

INTELLECTUAL PROPERTY

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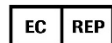
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