

CONFIRM anti-PAX5 (SP34) Rabbit Monoclonal Primary Antibody

REF 790-4420
05552729001

IVD Σ 50

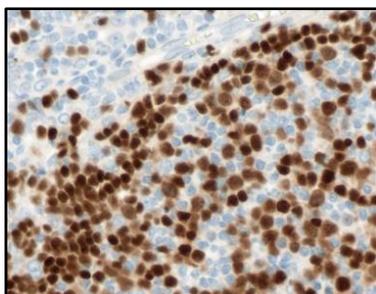


Figure 1. CONFIRM anti-PAX5 (SP34) antibody nuclear staining of B lymphocytes in tonsil.

This antibody is intended for in vitro diagnostic (IVD) use.

SUMMARY AND EXPLANATION

CONFIRM anti-PAX5 (SP34) Rabbit Monoclonal Primary Antibody (CONFIRM anti-PAX5 (SP34) antibody) is a rabbit monoclonal antibody directed against a synthetic peptide derived from the amino acid sequence within the C-terminus of human PAX5 protein. The PAX5 gene encodes for the B-cell-specific activator protein (BSAP), but PAX5 is the more commonly used term in diagnostic pathology literature.^{1,2} In the early stages of B cell development, PAX5 influences the expression of several B cell specific genes, which code for CD79, CD19 and CD20.² PAX5 is expressed primarily in pro-, pre-, and mature B cells, but not in plasma cells.^{1,2,3} Aside from B cells, PAX5 is detected in the developing central nervous system and adult testis.¹ PAX5 is also detected in neoplasms derived from B cells.^{1,2,3,4} PAX5 is a pan-B cell marker and expressed in the majority of B cell lymphomas without plasma cell differentiation.^{1,2,3,4} Plasma cell neoplasms, multiple myeloma, and plasmablastic lymphomas are typically negative when stained with PAX5.^{1,5} PAX5 expression is detected in a subset of Hodgkin lymphomas but absent in T-cell lymphomas.^{1,2,3,4}

The detection of PAX5 by immunohistochemistry (IHC) with the CONFIRM anti-PAX5 (SP34) antibody may be used as an aid in the identification of normal and neoplastic B-cells and the classification of Hodgkin lymphomas. This antibody may be used as part of a panel of IHC studies. The staining pattern is nuclear.

PRINCIPLE OF THE PROCEDURE

CONFIRM anti-PAX5 (SP34) antibody binds to the PAX5 protein in formalin-fixed, paraffin-embedded (FFPE) tissue sections. This antibody can be visualized using *ultraView* Universal DAB Detection Kit (Cat. No. 760-500 / 05269806001). Refer to the *ultraView* Universal DAB Detection Kit method sheet for further information.

In addition to staining with CONFIRM anti-PAX5 (SP34) antibody, a second slide should be stained with the appropriate negative control reagent.

MATERIAL PROVIDED

CONFIRM anti-PAX5 (SP34) antibody contains sufficient reagent for 50 tests. One 5 mL dispenser of CONFIRM anti-PAX5 (SP34) antibody contains approximately 5 µg of a recombinant rabbit monoclonal antibody. The antibody is diluted in Tris-HCl with carrier protein, and 0.10% ProClin 300, a preservative. Specific antibody concentration is approximately 1.0 µg/mL. There is no known non-specific antibody reactivity observed in this product.

CONFIRM anti-PAX5 (SP34) antibody is a recombinant rabbit monoclonal antibody produced as 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 General 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. EZ Prep Concentrate (10X) (Cat. No. 950-102 / 05279771001)
6. Reaction Buffer Concentrate (10X) (Cat. No. 950-300 / 05353955001)
7. LCS (Predilute) (Cat. No. 650-010 / 05264839001)
8. ULTRA LCS (Predilute) (Cat. No. 650-210 / 05424534001)
9. Cell Conditioning Solution (CC1) (Cat. No. 950-124 / 05279801001)
10. ULTRA Cell Conditioning Solution (ULTRA CC1) (Cat. No. 950-224 / 05424569001)
11. Hematoxylin II (Cat. No. 790-2208 / 05277965001)
12. Bluing Reagent (Cat. No. 760-2037 / 05266769001)
13. Permanent mounting medium
14. Cover glass
15. Automated coverslipper
16. General purpose laboratory equipment
17. 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 is 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.⁶ 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. 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.
6. Positively charged slides may be susceptible to environmental stresses resulting in inappropriate staining of any IHC assay (for example, lack of primary antibody or counterstain on the tissue). Ask your Roche representative for a copy of "Impacts of Environmental Stresses on IHC Positively Charged Slides" to better understand how to use these types of slides.

7. 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.^{7,8}
8. Avoid contact of reagents with eyes and mucous membranes. If reagents come in contact with sensitive areas, wash with copious amounts of water.
9. Avoid microbial contamination of reagents as it may cause incorrect results.
10. 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.
11. Consult local and/or state authorities with regard to recommended method of disposal.
12. Product safety labeling primarily follows EU GHS guidance. Safety data sheet available for professional user on request.
13. 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
 Warning	H317	May cause an allergic skin reaction.
	H412	Harmful to aquatic life with long lasting effects.
	P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
	P273	Avoid release to the environment.
	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, a mixture of: 5-chloro-2-methyl-4-isothiazolin-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 Table 2 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 790-4420.

Table 2. Recommended staining protocol for CONFIRM anti-PAX5 (SP34) antibody with *ultraView* Universal DAB Detection Kit on BenchMark IHC/ISH instruments.

Procedure Type	Method	
	XT	ULTRA
Deparaffinization	Selected	Selected
Cell Conditioning (Antigen Unmasking)	CC1, Standard	ULTRA CC1, 64 minutes, 95°C
Antibody (Primary)	16 minutes, 37°C	32 minutes, 36°C
Counterstain	Hematoxylin II, 2 to 4 minutes	

Procedure Type	Method	
	XT	ULTRA
Post Counterstain	Bluing, 2 to 4 minutes	

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."⁹

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.

Examples of positive control tissues for this antibody are normal tonsil or spleen.

STAINING INTERPRETATION / EXPECTED RESULTS

The cellular staining pattern for CONFIRM anti-PAX5 (SP34) antibody is nuclear.

SPECIFIC LIMITATIONS

This antibody may demonstrate non-specific cytoplasmic staining in endothelial cells.

The recommended tissue fixative is 10% neutral buffered formalin. Variable results may occur as a result of prolonged fixation or special processes, such as decalcification of bone marrow preparations.

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

Sensitivity and Specificity

Table 3. Sensitivity/Specificity of CONFIRM anti-PAX5 (SP34) antibody was determined by testing FFPE normal tissues.

Tissue ^a	# positive / total cases	Tissue ^a	# positive / total cases
Cerebrum	0/3	Thymus ^b	1/3
Cerebellum	0/3	Myeloid (Bone marrow)	5/8
Adrenal gland	0/3	Lung	0/3
Ovary	0/3	Heart	0/3
Pancreas	0/3	Esophagus	0/3
Parathyroid gland	0/3	Stomach	0/3
Hypophysis (Pituitary)	0/3	Small intestine ^b	0/3
Testis	0/3	Colon	0/3
Thyroid	0/3	Liver	0/3
Breast	0/3	Salivary gland	0/3

Tissue ^a	# positive / total cases	Tissue ^a	# positive / total cases
Spleen	3/3	Kidney	0/3
Tonsil	2/3	Prostate	0/3
Endometrium	0/3	Cervix	0/3
Skeletal muscle	0/3	Skin	0/3
Nerve	0/3	Mesothelium	0/3
Reactive lymph node	8/10	Bladder	0/3

^a May find cytoplasmic staining in endothelial cells

^b Focal B cell staining

Table 4. Sensitivity/Specificity of CONFIRM anti-PAX5 (SP34) antibody was determined by testing a variety of FFPE neoplastic tissues.

Pathology ^a	# positive / total cases
Glioblastoma (Cerebrum)	0/1
Meningioma (Cerebrum)	0/1
Ependymoma (Cerebrum)	0/1
Oligodendroglioma (Cerebrum)	0/1
Serous carcinoma (Ovary)	0/1
Mucinous carcinoma (Ovary)	0/1
Pancreatic neuroendocrine neoplasm (Pancreas)	0/1
Adenocarcinoma (Pancreas)	0/1
Seminoma (Testis)	0/1
Embryonal carcinoma (Testis)	0/1
Medullary carcinoma (Thyroid)	0/1
Papillary carcinoma (Thyroid)	0/1
Ductal carcinoma in situ (Breast)	0/1
Lobular carcinoma in situ (Breast) ^b	0/1
Invasive ductal carcinoma (Breast) ^b	0/1
Small cell carcinoma (Lung)	0/1
Squamous cell carcinoma (Lung)	0/1
Adenocarcinoma (Lung)	0/1
Squamous cell carcinoma (Esophagus)	0/1
Adenocarcinoma (Esophagus)	0/1
Mucinous adenocarcinoma (Stomach)	0/1
Adenocarcinoma (Gastrointestinal) ^b	0/1
Gastrointestinal stromal tumor (GIST) (Small Intestine)	0/1
Adenocarcinoma (Colon) ^b	0/1
Gastrointestinal stromal tumor (GIST) (Colon)	0/1
Adenocarcinoma (Rectum)	0/1

Pathology ^a	# positive / total cases
Gastrointestinal stromal tumor (GIST) (Rectum)	0/1
Hepatocellular carcinoma (Liver)	0/1
Hepatoblastoma (Liver)	0/1
Clear cell carcinoma (Kidney) ^b	0/1
Adenocarcinoma (Prostate)	0/1
Urothelial carcinoma (Prostatic urethra) ^b	0/1
Leiomyoma (Uterus)	0/1
Carcinoma (Endometrium)	0/1
Clear cell carcinoma (Endometrium)	0/1
Squamous cell carcinoma (Cervix)	0/2
Embryonal rhabdomyosarcoma (Striated muscle)	0/1
Melanoma (Rectum)	0/1
Basal cell carcinoma (Skin)	0/1
Squamous cell carcinoma (Skin)	0/1
Neurofibroma (Lumbar)	0/1
Neuroblastoma (Retroperitoneum)	0/1
Mesothelioma (Peritoneum)	0/1
Urothelial carcinoma (Bladder) ^b	0/1
Leiomyosarcoma (Bladder)	0/1
Osteosarcoma	0/1
Spindle cell rhabdomyosarcoma (Peritoneum)	0/1
Leiomyosarcoma (Smooth muscle)	0/1
Myeloid sarcoma	0/1
Hodgkin lymphoma	3/3
B-Cell lymphoma, NOS	38/41
Diffuse large B-Cell lymphoma	17/18
Follicular lymphoma	7/7
Extranodal marginal zone B-Cell lymphoma	2/2
Mantle cell lymphoma	4/4
Lymphoplasmacytic lymphoma	1/2
Plasmablastic lymphoma	0/1
MALT B-Cell lymphoma	11/14
T cell lymphoma, NOS	0/3
Angioimmunoblastic T cell lymphoma	0/3
Anaplastic large cell lymphoma	2/2
Peripheral T cell lymphoma	0/3
Natural-killer T cell lymphoma (NK/T cell lymphoma)	0/2

Pathology ^a	# positive / total cases
B lymphoblastic lymphoma	7/10
T lymphoblastic lymphoma	0/5

^a May find cytoplasmic staining in endothelial cells

^b Infiltrating B-cells staining positive, tumor is negative

Precision

Precision studies for CONFIRM anti-PAX5 (SP34) antibody were completed to demonstrate:

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

All studies met their acceptance criteria.

CLINICAL PERFORMANCE

Clinical performance data relevant to the intended purpose of CONFIRM anti-PAX5 (SP34) 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

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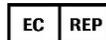
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CONTACT INFORMATION



Ventana Medical Systems, Inc.
1910 E. Innovation Park Drive
Tucson, Arizona 85755
USA
+1 520 887 2155
+1 800 227 2155 (USA)

www.roche.com



Roche Diagnostics GmbH
Sandhofer Strasse 116
D-68305 Mannheim
Germany

