

S100P

Concentrated and Prediluted Polyclonal Antibody
901-3010-040319

BIOCARE
M E D I C A L

Catalog Number:	ACI 3010 A, B	API 3010 AA	VLTR 3010 G20
Description:	0.1, 0.5 mL, conc.	6.0 mL, RTU	20 mL, RTU
Dilution:	1:100	Ready-to-use	Ready-to-use
Diluent:	Renoir Red	N/A	N/A

Intended Use:

For In Vitro Diagnostic Use

S100P is a rabbit polyclonal antibody that is intended for laboratory use in the qualitative identification of S100P protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Summary and Explanation:

Placental S100 (S100P) binding protein was originally identified in placenta and subsequently associated with cancer. S100P is a member of the S100 family of proteins, which function as extracellular and/or intracellular regulators of diverse cellular processes and participate in various human pathologies. Functional studies of S100P indicate that its biological activities are exerted through extracellular signaling via the RAGE receptor, resulting in increased proliferation and survival, or through intracellular interaction with ezrin, leading to increased cell migration and metastasis. S100P expression has been detected in human tumor cell lines and tissues derived from breast, prostate, pancreas, lung and colon, where it was associated with a malignant phenotype, hormone independence and resistance to chemotherapy. Over-expression of S100P was shown to promote tumorigenesis and metastasis in diverse cancer models. Recent studies have shown that S100P is highly expressed in bladder cancers (poorly differentiated), where expression is localized in the cytoplasm and in the nucleus of the cell. S100P has been shown to be negative in the vast majority of renal cell and prostate carcinomas; thus S100P can be used in the differential diagnosis of bladder, prostate and renal cell carcinomas. Additionally, S100P was useful in the diagnosis of adenocarcinoma of the pancreas in fine-needle aspiration biopsy specimens.

Principle of Procedure:

Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, a one-step or two-step detection procedure can be applied. A one-step procedure will feature an enzyme labeled polymer that binds the primary antibody. A two-step procedure will feature a linker antibody added to bind to the primary antibody. An enzyme-labeled polymer is then added to bind the linker antibody. These detections of the bound antibodies are evidenced by a colorimetric reaction.

Source: Rabbit polyclonal

Species Reactivity: Human and dog

Clone: N/A

Isotype: N/A

Protein Concentration: Call for lot specific Ig concentration.

Epitope/Antigen: Placental S100

Cellular Localization: Nuclear and cytoplasmic

Positive Tissue Control: Bladder cancer

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative

Storage and Stability:

Store at 2°C to 8°C. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C

Protocol Recommendations (VALENT® Automated Slide Staining Platform):

VLTR3010 is intended for use with the VALENT. Refer to the User Manual for specific instructions for use. Protocol parameters in the Protocol Manager should be programmed as follows:

Deparaffinization: Deparaffinize for 8 minutes with Val DePar.

Pretreatment: Perform heat retrieval at 98°C for 60 minutes using Val AR-Lo pH, 5X (use at 1X).

Peroxidase Block: Block for 5 minutes with Val Peroxidase Block.

Protein Block (Optional): Incubate for 10-20 minutes with Val Background Block.

Primary Antibody: Incubate for 30 minutes.

Secondary: N/A

Linker: Incubate for 10 minutes with Val Universal Linker.

Polymer: Incubate for 20 minutes with Val Universal Polymer.

Chromogen: Incubate for 5 minutes with Val DAB.

Counterstain: Counterstain for 5 minutes with Val Hematoxylin.

Protocol Recommendations (intelliPATH FLX® and manual use):

Peroxide Block: Block for 5 minutes with Peroxidized 1.

Pretreatment: Perform heat retrieval using Reveal Decloaker. Refer to the Reveal Decloaker product data sheet for specific instructions.

Protein Block (Optional): Incubate for 5-10 minutes at RT with Background Punisher.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: N/A

Polymer: Incubate for 30 minutes at RT with a secondary-conjugated polymer.

Chromogen: Incubate for 5 minutes at RT with Biocare's DAB – OR – Incubate for 5-7 minutes at RT with Warp Red.

Counterstain:

Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

Technical Note:

This antibody, for intelliPATH FLX and manual use, has been standardized with MACH 4 detection system. Use TBS for washing steps.

Limitations:

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.

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Quality Control:

Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2) CLSI Wayne, PA USA (www.clsi.org). 2011

Precautions:

1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN₃) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (6)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (7)
3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The SDS is available upon request and is located at <http://biocare.net>.

Troubleshooting:

Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.

References:

1. Esheba GE, *et al.* Expression of the urothelial differentiation markers GATA3 and placental S100 (S100P) in female genital tract transitional cell proliferations. *Am J Surg Pathol.* 2009 Mar; 33(3):347-53.
2. Chuang AY, *et al.* Immunohistochemical differentiation of high-grade prostate carcinoma from urothelial carcinoma. *Am J Surg Pathol.* 2007 Aug; 31(8):1246-55.
3. Higgins JP, *et al.* Placental S100 (S100P) and GATA-3: markers for transitional epithelium and urothelial carcinoma discovered by complementary DNA microarray. *Am J Surg Pathol.* 2007 May; 31(5):673-80.
4. Gibadulinova A, *et al.* Transcriptional regulation and functional implication of S100P in cancer. *Amino Acids.* 2011 Oct; 41(4):885-92.
5. Deng H, *et al.* Usefulness of S100P in diagnosis of adenocarcinoma of pancreas on fine-needle aspiration biopsy specimens. *Am J Clin Pathol.* 2008 Jan; 129(1):81-8.
6. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
7. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.