

S100P

Concentrated and Prediluted Polyclonal Antibody
902-3010-071817

BIOCARE
M E D I C A L

Catalog Number:	ACR 3010 A, B	APR 3010 AA
Description:	0.1, 0.5 ml, concentrated	6.0 ml, prediluted
Dilution:	1:50-1:100	Ready-to-use
Diluent:	Van Gogh Yellow	N/A

Intended Use:

For Research Use Only. Not for use in diagnostic procedures.

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, an enzyme labeled polymer is added to bind to the primary antibody. The detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Rabbit polyclonal

Species Reactivity: Human and dog

Clone: N/A

Isotype: N/A

Total Protein Concentration: ~10 mg/ml. Call for lot specific IgG concentration.

Epitope/Antigen: Placental S100

Cellular Localization: Nuclear and cytoplasmic

Positive Control: Bladder cancer

Normal Tissue: Bladder

Abnormal Tissue: 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. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Staining Protocol Recommendations:

Peroxide Block: Block for 5 minutes with Biocare's Peroxidized 1.

Pretreatment Solution: Reveal

Pretreatment Protocol:

Heat Retrieval Method: Retrieve sections under pressure using Biocare's Decloaking Chamber, followed by a wash in distilled water. Alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 10 minutes then wash in distilled water.

Protein Block (Optional): Incubate for 10 minutes at RT with Biocare's Background Punisher.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: N/A

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

Chromogen: Incubate for 5 minutes at RT when using Biocare's DAB –OR– Incubate for 5-7 minutes at RT when using Biocare's 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 has been standardized with Biocare's MACH 4 detection system. It can also be used on an automated staining system and with other Biocare polymer detection kits. Use TBS buffer for washing steps.

Limitations:

This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

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:

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)

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 in contact with sensitive areas, wash with copious amounts of water.

Precautions Cont'd:

Microbial contamination of reagents may result in an increase in nonspecific staining. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change. The MSDS is available upon request and is located at <http://biocare.net/support/msds/>.

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.



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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-Third Edition CLSI document M29-A3 Wayne, PA 2005.



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