S100 Protein Cocktail

Prediluted Mouse Monoclonal Cocktail Antibody

Control Number: 902-089IP-080812

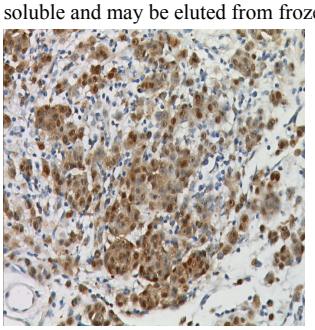
Catalog Number:	Description:
IPR 089 G10	10 ml, predilute

Intended Use:

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

Summary and Explanation:

The S100 antibody cocktail recognizes proteins of 21-24 kDa, identified as A and B subunits of S100 protein. S100 belongs to the family of calcium binding proteins such as calmodulin and troponin C. S100A is composed of alpha and beta chains whereas S100B is composed of two beta chains. Antibody S100 stains melanocytes, schwannomas, peripheral neural tissue, astrocytes, benign and malignant melanomas, and their metastases. S100 protein is also expressed in the antigen presenting cells such as the Langerhans cells in skin and interdigitating reticulum cells in the paracortex of lymph nodes. Histocytosis X can also be confirmed by S100 staining. The S100 monoclonal cocktail is potentially more sensitive than other S100 single clone antibodies; and thus is an excellent pan-melanoma marker. S100 protein is highly soluble and may be eluted from frozen tissue during staining.



Melanoma stained with S100 Cocktail antibody.

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 secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal

Species Reactivity: Human, mouse and rat

Clone: 15E2E2 + 4C4.9

Isotype: IgG2ak + IgG2a

Antibody Category: Melanoma

Epitope/Antigen: S100 Protein

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

Cellular Localization: Cytoplasmic and nuclear

Positive Control: Melanoma or Schwannoma

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative

Storage and Stability:

Store at 2ºC to 8ºC. 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.

Protocol Recommendations:

Refer to the intelliPATH Automated Slide Stainer Manual for detailed instructions on its use, including programming protocols, starting a staining run and instrument maintenance. Please contact Biocare Medical Technical Support with questions.

Pretreatment (recommended in most cases): Perform heat retrieval using Biocare's Reveal Decloaker. Refer to the Reveal Decloaker data sheet for specific instructions.

Optional: No Pretreatment (recommended for better morphology preservation in cutaneous melanomas).

Protocol Recommendations cont'd:

Peroxide Block: Block for 5 minutes at RT.

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

Primary Antibody: Incubate for 30 minutes at RT if no pretreatment used. Incubate for 15 minutes at RT if heat pretreatment used.

Secondary: Incubate for 10 minutes at RT if no pretreatment used. Incubate for 5 minutes at RT if heat pretreatment used.

Tertiary: Incubate for 10 minutes at RT if no pretreatment used. Incubate for 5 minutes at RT if heat pretreatment used.

Chromogen: Incubate for 5 minutes with DAB at RT.

Counterstain:

1. Rinse with deionized water.
2. Incubate for 5 minutes with automated Hematoxylin.
3. Rinse with TBS Buffer for 1 minute followed by a rinse with deionized water.

Staining Procedure:

Preoptimized intelliPATH protocols with preset parameters can be displayed, printed and edited according to the procedure in the instrument's Operator's Manual. Refer to the Operator's Manual for additional instruction to navigate intelliPATH software and stainer. Use TBS for washing steps unless otherwise specified.

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 (NaN_3) 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) (7)
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 in contact with sensitive areas, wash with copious amounts of water. (8)
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 MSDS is available upon request and is located at http://biocare.net/support/msds/.

Technical Support: Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

Limitations and Warranty:

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.

There are no warranties, expressed or implied, which extend beyond this description. Biocare is not liable for property damage, personal injury, or economic loss caused by this product.

References:

1. Banerjee SS, Bishop PW, Nicholson CM, Eyden BP. Malignant melanoma showing smooth muscle differentiation. J Clin Pathol, Nov; 49(11):950-951, 1996.
2. Argenyi ZB, *et al*. S-100 protein-negative malignant melanoma: fact or fiction? A light- microscopic and immunohistochemical study. Am J. Dermatopathol, Jun; 16 (3):233-240, 1994.
3. Fernando SS, Johnson S, Bate J. Immunohistochemical analysis of cutaneous malignant melanoma: comparison of S-100 protein, HMB45 monoclonal antibody and NKI/C3 monoclonal antibody. Pathology, Jan; 26(1):16-19, 1994.

S100 Protein Cocktail

Prediluted Mouse Monoclonal Cocktail Antibody

Control Number: 902-089IP-080812

References cont'd:

4. Tousignant J, *et al*. Immunohistochemical characteristics of malignant melanoma. A study of 40 cases and review of the literature. Arch Anat Cytol Pathol, 38(1-2):5 -10, 1990.

5. Miettinen M, Franssila K. Immunohistochemical spectrum of malignant melanoma. The common presence of keratins. Lab Invest, Dec; 61(6):623-628, 1989.

6. Fitzgibbons PL, Chaurushiya PS, Nichols PW, Chandrasoma PT, Martin SE. Primary mucosal malignant melanoma: an immunohistochemical study of 12 cases with comparison to cutaneous and metastatic melanomas. Hum Pathol, Mar; 20(3):269 -272, 1989.

7. 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."

8. 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.