



Factor XIIIa

Concentrated and Prediluted Monoclonal Antibody

Control Number: 901-357-090808

ISO
9001:2000
CERTIFIED

Catalog Number:	CM 357 AK, BK, CK	PM 357 AA
Description:	0.1, 0.5, 1.0 ml, concentrated	6.0ml, prediluted
Dilution:	1:50-1:100	Ready-to-use
Diluent:	Van Gogh Yellow	N/A

Intended Use:

For In Vitro Diagnostic Use

Summary and Explanation:

This is a monoclonal antibody to the A-subunit of human coagulation Factor XIII. It recognizes human Factor XIII A-chain in both reduced and non-reduced forms. It does not react with human Factor XIII B-chain or human Factor XII. Factor XIII is a beta-globulin found in plasma and is composed of two subunits. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160,000. Factor XIII is present in plasma as an alpha2beta2 heterodimer (M.W. 320,000); whereas in platelets, only the alpha2 unit exists. Factor XIIIa is a dermal dendrocyte marker and shows variable reaction with these types of tumors. It can be used for histiocytic phenotyping and has been reported to mark capillary hemangiomas and tumors of the central nervous system. Factor XIIIa has also been used with CD34 to differentiate between dermatofibroma and dermatofibrosarcoma protuberans.

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 MACH 2 enzyme labeled polymer is added to bind to the primary antibody. The detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Mouse monoclonal**Species Reactivity:** Human; others not tested**Clone:** E980.1**Isotype:** IgG1**Total Protein Concentration:** ~10 mg/ml. Call for lot specific Ig Concentration.**Epitope/Antigen:** Factor XIIIa c-terminus**Cellular Localization:** Cytoplasmic**Positive Control:** Capillary hemangioma, dermatofibroma, placenta or skin**Normal Tissue:** Skin, placenta**Abnormal Tissue:** Dermatofibroma, xanthoma**Known Applications:**

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative.

Van Gogh Yellow (PD902)

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.

Protocol Recommendations**Peroxide Block:**

If using an HRP system, block for 5 minutes with BIOCARE's PEROXIDAZED 1.

Pretreatment Solution (recommended): N/A**Pretreatment Protocol:** N/A**Protein Block:**

Incubate for 10-15 minutes at RT with BIOCARE's Background Sniper.

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 10 minutes at RT when using BIOCARE's Vulcan Fast Red.

Technical Note:

This antibody has been standardized with BIOCARE's MACH 2 Mouse-HRP 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.

Performance Characteristics:

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. These products are tools that can be used for interpretation of morphological findings in conjunction with other diagnostic tests and pertinent clinical data by a qualified pathologist.

Quality Control:

Refer to NCCLS Quality Assurance for Immunocytochemistry approved guidelines, December 1999 MM4-A Vol.19 No.26 for more information about Tissue Controls.

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.

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.

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.

Limitations and Warranty:

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. Probst-Cousin S, Rickert CH, Gullotta F. Factor XIIIa-immunoreactivity in tumors of the central nervous system. Clin Neuropathol 1998 Mar;17(2):79-84.
2. Silverman JS, Tamsen A. High grade malignant fibrous histiocytomas have bimodal cycling populations of factor XIIIa + dendrophages and dedifferentiated mesenchymal cells possibly derived from CD34+ fibroblasts. Cell Vis 1998 Jan;5(1):73-76.
3. Goldblum JR, Tuthill RJ. CD34 and factor-XIIIa immunoreactivity in dermatofibrosarcoma protuberans and Dermatofibroma. Am J Dermatopathol 1997 Apr;19(2):147-153.

tel: 800-799-9499

fax: 925-603-8080

www.biocare.net

BIOCARE MEDICAL, LLC.
4040 Pike Lane
Concord, CA 94520 USAAR-MED LIMITED
(Company number 3154742)
Runnymede Malthouse Business Center
Off Hummer Road, Egham
Surrey TW20 9BD



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References cont'd:

4. Zelger BG et al. Granular cell dermatofibroma. *Histopathology* 1997 Sep;31(3):258-262.
5. Silverman JS, Lomvardias S. An unusual soft tissue tumor with features of angiomatoid malignant fibrous histiocytoma composed of bimodal CD34 and factor XIIIa positive dendritic cell subsets. CD34 and factor XIIIa in angiomatoid MFH. *Pathol Res Pract* 1997;193(1):51-58.
6. Sangueza OP, Salmon JK, White CR Jr, Beckstead JH. Juvenile xanthogranuloma: a clinical, histopathologic and immunohistochemical study. *J Cutan Pathol* 1995 Aug;22(4):327-335
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. National Committee for Clinical Laboratory Standards(NCCLS). Protection of laboratory workers from infectious diseases transmitted by blood and tissue; proposed guideline. Villanova, PA 1991;7(9). Order code M29-P.

