Glial Fibrillary Acidic Protein (GFAP{P})

Concentrated and Prediluted Polyclonal Antibody
901-040-092017

BIOCARE MEDICAL

Catalog Number:	**CP 040 A, B**	**PP 040 AA**
Description:	0.1, 0.5 ml, concentrated	6.0 ml, prediluted
Dilution:	1:100	Ready-to-use
Diluent:	Da Vinci Green	N/A

Intended Use:
For In Vitro Diagnostic Use
Glial Fibrillary Acidic Protein (GFAP{P}) is a rabbit polyclonal antibody that is intended for laboratory use in the qualitative identification of glial fibrillary acidic 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:
This antibody reacts with human GFAP and has been solid phase absorbed with human and cow serum. Anti-GFAP stains astrocytes and some groups of ependymal cells and their corresponding tumors. In the peripheral nervous system, Schwann cells, enteric glial cells and satellite cells are stained. Weak staining of axons has been observed which is caused by cross-reaction with neurofilament. It is useful for distinguishing neoplasms of astrocytic origin from other neoplasms in the central nervous system. Negative staining has been observed with lymphatic tissue, muscle, gastrointestinal tract, liver, kidney, pancreas and bladder.

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. This detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Rabbit polyclonal
Species Reactivity: Human, mouse and rat
Clone: N/A
Isotype: N/A
Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.
Epitope/Antigen: Glial fibrillary acidic protein
Cellular Localization: Cytoplasmic
Positive Tissue Control: Normal brain or astrocytoma

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. Diluted reagents should be used promptly; any remaining reagent should be stored at 2ºC to 8ºC.

Protocol Recommendations:
Peroxide Block: Block for 5 minutes with Biocare's Peroxidazed 1.
Digestion Method:
Digest with Pepsin enzyme for 5 minutes at 37°C - or - for 15 minutes at RT.
Protein Block (Optional): Incubate for 5-10 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 secondary-conjugated polymer.

Protocol Recommendations Cont'd:
Chromogen: Incubate for 5 minutes at RT with Biocare's DAB - OR - Incubate for 5-7 minutes at RT with 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. Use TBS buffer 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. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.
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 (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) (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 in 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.

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References:
1. Huang MC, *et al.* A clinico-immunohistochemical study of giant cell glioblastoma. Noshuyo Byori. 1996 Apr;13(1):11-16.
2. Xu KP, Liu SL, Ni C. Immunohistochemical evidence of neuronal and glial differentiation in retinoblastoma. Br J Opthalmol. 1995 Aug;79(8):771-6.
3. Korshunov AG, Sycheva RV. Expression of glial fibrillary acidic protein and protein S-100 in cerebral astrocytic gliomas of varying degrees of malignancy. Arkh Patol. 1995 Jul;57(4):30-8.
4. McLendon RE, Bigner DD. Immunohistochemistry of the glial fibrillary acidic protein: basic and applied considerations. Brain Pathol. 1994 Jul;4(3):221-8.
5. Xu QZ, Duan HL, Lu DH. Immunohistochemical quantitative study of glial fibrillary acid protein and vimentin astrocytomas. Chuang-hua Ping Li Hsueh Tsa Chih. 1994 Apr;23(2):66-8.
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.

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