CD117/c-kit
Concentrated and Prediluted Rabbit Monoclonal Antibody
901-296-011819

Catalog Number: CME 296 AK, BK, CK PME 296 AA
Description: 0.1, 0.5, 1.0 mL, conc. 6.0 mL, RTU
Dilution: 1:50
Diluent: Renoir Red N/A

Intended Use:
For In Vitro Diagnostic Use
CD117/c-kit [EP10] is a rabbit monoclonal antibody that is intended for laboratory use in the qualitative identification of CD117 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:
CD117/c-kit is a member of Tyrosine Kinase Receptor (TKR) family and highly homologous to receptor PDGF and CSF-1. This antibody recognizes the extracellular domain and is expressed by a variety of normal and abnormal cell types. In normal cells, the CD117 antibody has been shown to label breast epithelium, germ cells, melanocytes, stem cells and mast cells. In abnormal cells, it has been shown to label testicular germ cells, endometrial carcinomas, papillary and follicular thyroid carcinomas, small cell carcinomas, melanomas and ovarian epithelial carcinomas. It has also been shown to be an effective marker for mast cell disorders, gastrointestinal stromal tumors and immunotyping of blasts in human bone marrow.

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 monoclonal
Species Reactivity: Human; others not tested
Clone: EP10 (previously known as Y145)
Isotype: IgG
Protein Concentration: Call for lot specific Ig concentration.
Epitope/Antigen: CD117
Cellular Localization: Cell membrane/cytoplasmic
Positive Tissue Control: Skin (Mast cells), gastrointestinal stromal tumor or seminoma
Known Applications: Immunohistochemistry (formalin-fixed paraffin-embedded tissues)
Supplied As: Buffer with protein carrier and preservative Renoir Red (PD9094)

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): VLTR296 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: Perform heat retrieval for 8 minutes with Val DePar.
- Pretreatment: Perform heat retrieval at 98°C for 60 minutes using Val AR-Hi 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.

Protocol Recommendations (ONCORE™ Automated Slide Staining System): OAI296 is intended for use with the ONCORE. Refer to the User Manual for specific instructions for use. Protocol parameters in Protocol Editor should be programmed as follows:

- Protocol Name: CD117 Rb
- Protocol Template (Description): Rb HRP Template 1
- Dewaxing (DS Option): DS2
- Antigen Retrieval (AR Option): AR2, low pH; 101°C for Seminoma, 90°C for GIST
- Reagent Name, Time, Temp.: CD117 Rb, 30 min., 25°C

Protocol Recommendations (Ventana BenchMark ULTRA): PME296 is compatible for use with the BenchMark ULTRA. Refer to the User Manual for specific instructions for use. Recommended protocol parameters are as follows:

- Template/Detection: OptiView DAB IHC
- Pretreatment Protocol: CC1 32 minutes
- Peroxidase: Pre Primary Peroxidase Inhibitor
- Primary Antibody: 16 minutes, 36°C

Limitations:
The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixed, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation
Limitations Cont’d:
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.

Quality Control:
Refer to CLSI Quality Standards for Design and Implementation of
Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-
2A) 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) (4)
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. (5)
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. Miettinen M, Sarlomo-Rikala M, Lasota J. Gastrointestinal stromal tumors:
recent advances in understanding of their biology. Hum Pathol. 1999
2. Arber DA, Tamayo R, Weiss LM. Paraffin section detection of the c-kit gene
product (CD117) in human tissues: value in the diagnosis of mast cell
3. Escribano L, et al. Sequential immunophenotypic analysis of mast cells in
a case of systemic mast cell disease evolving to a mast cell leukemia.
22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains
to Remove Azide Salts."
5. Clinical and Laboratory Standards Institute (CLSI). Protection of
Laboratory Workers from Occupationally Acquired Infections; Approved

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covered by the following U.S. Patents, No. 5,675,063 and/or 7,429,487.

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