CD33
Concentrated and Prediluted Monoclonal Antibody
901-3116-052623

Catalog Number: ACI 3116 A, C
Description: 0.1, 1.0 mL, conc.
Dilution: 1:50
Diluent: Renoir Red

Intended Use:
For In Vitro Diagnostic Use

CD33 [PW544] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of CD33 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:
CD33 or Siglec-3 is a 67 kDa glycosylated transmembrane receptor expressed on myeloid-specific cells (1,2). In the past, CD33 was only used for flow cell cytometry. Recently, a CD33 for paraffin-embedded tissues has been developed and has been used to phenotype acute myelogenous leukemias (1,2). In cases of acute leukemia, the CD33 antibody showed equivalent results by immunohistochemical analysis compared with flow cytometric analysis (1). The CD33 antibody was also found to be a useful marker in the workup of myeloid sarcomas (1,3).

In normal bone marrow trephine biopsies, clone PW544 stains myeloid, myelomonocytic hemopoiesis and mature macrophages; cells of the erythroid and megakaryocytes series are negative for CD33 (1). In conclusion, CD33 antibody may be a useful marker as part of an antibody panel for the identification of acute leukemias, myeloid proliferative disorders and myeloid sarcomas on paraffin-embedded tissue samples (1-3).

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-, two- or three-step detection procedure can be employed. The one-step procedure will feature an enzyme-labeled polymer that binds to the primary antibody. A two-step procedure will feature a secondary antibody added to bind to the primary antibody. An enzyme-labeled polymer is then added to bind to the secondary antibody. The three-step detection procedure will feature a secondary antibody added to bind to the primary antibody followed by a linker antibody step for maximum binding. An enzyme-labeled polymer is then added to bind to the linker antibody. These detections of the bound antibodies are evidenced by a colorimetric reaction.

Source: Mouse monoclonal
Species Reactivity: Human; others not tested
Clone: PWS44
Isotype: IgG2b

Protein Concentration: Call for lot specific Ig concentration.

Epitope/Antigen: Prokaryotic recombinant protein corresponding to a region of the C2 domain on human CD33

Cellular Localization: Cell membrane / cytoplasm

Positive Tissue Control: Myeloid leukemia

Known Applications:
Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative

Storage and Stability:
Store at 2ºC to 8ºC. 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 2ºC to 8ºC.

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Quality Control:

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) (5)
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 into contact with sensitive areas, wash with copious amounts of water. (6)
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: