CD71
Concentrated and Prediluted Monoclonal Antibody
901-3110-110217

CD71 [H68.4] is a mouse monoclonal antibody that is intended for laboratory use in the qualitative identification of CD71 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:
CD71 (transferrin receptor), a cell surface proliferation marker, is involved in the cellular uptake of iron (1-3). CD71 has been shown to exhibit strong membranous and cytoplasmic staining in all erythroid precursors of normal and dyspoietic bone marrow biopsies (1,2). CD71 expression decreases with the maturation of erythrocytes. The highest level is seen in early forms and the lowest level in late normoblast stage. Most importantly, mature erythrocytes do not express CD71, which facilitates bone marrow analyses (1,2). When compared to other biomarkers for erythroid precursors, such as hemoglobin or CD235a (glycophorin A), CD71 displayed the most specific staining with clean and distinct staining patterns and did not label mature red blood cells (2). CD71 was positive in all cases of parvovirus and acute erythroleukemia, unlike glycophorin A and hemoglobin A (1). CD71 did not stain benign lymphoid infiltrates or low grade lymphomas involving the marrow (1). CD71 may therefore be a reliable erythroid marker in bone marrow (1,2). Additionally, CD71 was shown to be highly expressed in invasive breast carcinoma with acquired resistance to tamoxifen (3). Abundant CD71 staining was also associated with poor prognosis in ER+ /luminal-like breast cancer (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 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; others not tested

Clone: H68.4

Isotype: IgG1

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

Epitope/Antigen: CD71

Cellular Localization: Cell membrane, cytoplasm

Positive Tissue Control: Bone marrow

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

Supplied As: Buffer with protein carrier and preservative

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.

Intended Use:
For In Vitro Diagnostic Use

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Precautions Cont’d:
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. (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: