Novocastra™ Lyophilized Mouse Monoclonal Antibody CD10

MICROSYSTEMS

Product Code: NCL-CD10-270

Intended Use	FOR RESEARCH USE ONLY.
Specificity	Human CD10 molecule, also known as common acute lymphocytic leukemia antigen (CALLA).
Clone	56C6
Ig Class	IgG1
Antigen Used for Immunizations	Prokaryotic recombinant fusion protein corresponding to the external domain of the CD10 glycoprotein.
Hybridoma Partner	Mouse myeloma (p3-NS1-Ag4-1).
Preparation	Lyophilized tissue culture supernatant containing 15 mM sodium azide. Reconstitute with the volume of sterile distilled water indicated on the vial label.
Effective on Frozen Tissue	Yes. Acetone fixation recommended.
Effective on Paraffin Wax Embedded Tissue	Yes (using the high temperature antigen unmasking technique: see overleaf).
Recommendations on Use	Immunohistochemistry: Typical working dilution 1:100. Citrate-based buffer, pH 6.0. 30 minutes primary antibody incubation at 25 °C. Polymer detection recommended. Western Blotting: Typical working dilution 1:50–1:100.
Positive Controls	Immunohistochemistry: Small intestine or kidney. Western Blotting: Placenta.
Staining Pattern	Membrane.
Storage and Stability	Store unopened lyophilized antibody at 4 °C. Under these conditions, there is no significant loss in product performance up to the expiry date indicated on the vial label. The reconstituted antibody is stable for at least two months when stored at 4 °C. For long term storage, it is recommended that aliquots of the antibody are frozen at -20 °C (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Prepare working dilutions on the day of use.
General Overview	CD10 is a 100 kD cell surface metalloendopeptidase called neprilysin which inactivates a variety of biologically active peptides. It was initially identified as the common acute lymphoblastic leukemia antigen (CALLA) and considered to be tumor-specific. Subsequent studies, however, have shown that CD10 is expressed on the surface of a wide variety of normal and neoplastic cells. CD10 has been identified on the surface of normal early lymphoid progenitor cells, immature B cells within adult bone marrow and germinal centre B cells within lymphoid tissue. It is also expressed in various non-lymphoid cells and tissues, such as breast myoepithelial cells, bile canaliculi, fibroblasts, with especially high expression on the brush border of kidney and gut epithelial cells.
General References	McCluggage W G, Sumathi V P and Maxwell P. Histopathology. 39: 273–278 (2001). Ohshima K, Kawasaki C, Muta H, et al.. Histopathology. 39: 156–162 (2001). Tajima Y, Nakanishi Y, Yoshino T, et al.. Oncology. 61: 1–9 (2001). Xiao S-Y, Wang H L, Hart J, et al.. American Journal of Pathology. 159 (4): 1415–1421 (2001). Avery A K, Beckstead J, Renshaw A A, et al.. The American Journal of Surgical Pathology. 24 (2): 203–210 (2000). Takaki Y, Iwata N, Tsubuki S, et al.. Journal of Biochemistry. 128: 897–902 (2000). McIntosh G G, Lodge A J, Watson P, et al.. American Journal of Pathology. 154 (1): 77–82 (1999). Diaz de Leon E, Alkan S, Huang J C, et al.. Modern Pathology. 11 (11): 1046–1051 (1998). Scheueramann R H and Racila E. Leukemia and Lymphoma. 18: 385–397 (1995). Carrel S, Zografos L, Schreyer M, et al.. Melanoma Research. 3: 319–323 (1993). Kiyokawa N, Kokas Y, Ishimoto K, et al.. Clinical Experimental Immunology. 79: 322–327 (1990). Mechtersheimer G and Möller P. American Journal of Pathology. 134 (5): 961–965 (1989). Haralambidou S, Melo J V and Catovsky D. Journal of Clinical Pathology. 40: 490–493 (1987).

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Instructions for Use

Heat Induced Epitope Retrieval Combined With Polymer Detection For Immunohistochemical Demonstration On Paraffin Sections

1. Cut and mount sections on slides coated with a suitable tissue adhesive.
2. Deparaffinize sections and rehydrate to distilled water.
3. Place sections in 0.5% hydrogen peroxide/methanol for 10 minutes (or use other appropriate endogenous peroxidase blocking procedure). Wash sections in tap water.
4. Heat 1500 mL of the recommended epitope retrieval solution (Citrate based pH 6.0 - Epitope Retrieval Solution unless otherwise indicated overleaf) in a stainless steel pressure cooker until boiling. Cover but do not lock lid.
5. Position slides into metal staining racks (do not place slides close together as uneven staining may occur) and lower into pressure cooker ensuring slides are completely immersed in epitope retrieval solution. Lock lid.
6. When the pressure cooker reaches operating temperature and pressure (after about 5 minutes) start a timer for 1 minute (unless otherwise indicated on the data sheet).
7. When the timer rings, remove pressure cooker from heat source and run under cold water with lid on. DO NOT OPEN LID UNTIL THE INDICATORS SHOW THAT PRESSURE HAS BEEN RELEASED. Open lid, remove slides and place immediately into a bath of tap water.
8. Wash sections once using fresh Tris-Buffered Saline (TBS, pH 7.6) buffer for 5 minutes.
9. Place sections in diluted normal serum (eg NCL-G-SERUM) for 10 minutes.
10. Incubate sections with primary antibody.
11. Wash twice, each time using fresh TBS buffer for 5 minutes.
12. For visualization of the bound primary antibody, follow instructions supplied with the Polymer Detection System.
13. Counterstain with hematoxylin (if required), dehydrate and mount.

** (In most applications, Phosphate Buffered Saline, pH 7.6, can be used instead of TBS, pH 7.6).*

Safety Note

To ensure the correct and safe use of your pressure cooker, PLEASE READ THE MANUFACTURER'S INSTRUCTIONS.