

Product datasheet for **AM33127PU-S**

CD75 (ST6GAL1) Mouse Monoclonal Antibody [Clone ID: LN-1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	LN-1
Applications:	FC, IF, IHC
Recommended Dilution:	Flow Cytometry: 0.5-1.0 μ l/10 ⁶ cells. Immunofluorescence: 0.5-1 μ g/ml. Immunohistochemistry on Formalin-Fixed Paraffin Embedded Sections: 0.5-1.0 μ g/ml for 30 minutes at RT. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes. Positive Control: Daudi Cells, Germinal center B-cells in a lymph node or tonsil. Use LN1's ability to stain surface of erythrocytes as an internal positive control. Notes: 1. The CDw75 antibody stains the surface of erythrocytes and this feature can be used as an internal positive control for biological assay validation. 2. Germinal center B lymphocytes in lymph node or tonsils can be used as positive lymphocyte staining controls. 3. CDw75 is a carbohydrate antigen. In addition to the LN-1 antibody, other CDw75 antibody clones have been described in the literature. Each antibody may have different staining patterns due their specific reactivity to variable complex oligosaccharide CDw75 carbohydrate structures (Bast, 1992; Kumar, 2012).
Reactivity:	Human
Host:	Mouse
Isotype:	IgM
Clonality:	Monoclonal
Immunogen:	Nuclei from pokeweed mitogen stimulated peripheral blood lymphocytes (Epstein, 1984).



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Specificity:	<p>Recognizes a neuraminidase-sensitive sialoprotein (CDw75), present on cell membrane and cytoplasm of germinal center B-cells and derived lymphomas. This antibody clone <i>LN-1</i> reacts with RBC precursors of bone marrow, ductal and ciliated epithelial cells of kidney, breast, prostate, pancreas, lung, and with glioblastomas, astrocytomas, and Reed Sternberg cells in lymphocyte predominant Hodgkin's disease.</p> <p><i>LN-1</i> is shown to be a reliable antibody for ascribing a B-cell phenotype in known lymphoid tissues.</p> <p>The <i>LN-1</i> antibody is reactive on routinely processed Paraffin Embedded Sections and is therefore an excellent marker for B-cell malignancies.</p> <p>Cellular Localization: Cell surface and cytoplasmic.</p>
Formulation:	<p>10mM PBS State: Purified State: Liquid purified Ig fraction from Bioreactor Concentrate Stabilizer: 0.05% BSA Preservative: 0.05% Sodium Azide</p>
Concentration:	lot specific
Purification:	PEG precipitation
Conjugation:	Unconjugated
Storage:	<p>Store undiluted at 2-8°C. DO NOT FREEZE!</p>
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	46 kDa
Gene Name:	ST6 beta-galactoside alpha-2,6-sialyltransferase 1
Database Link:	Entrez Gene 6480 Human P15907

Background:

CDw75 (also known as CD75s) is an alpha (2,6)-sialylated neuraminidase-sensitive lymphocyte cell surface differentiation antigen synthesized by the ST6Gal 1 enzyme (Bast, 1992; Kumar, 2012). CDw75 was characterized in 1989 at the 4th Leucocyte Typing Workshop (code number LN1) as an antigen or differentiation marker expressed by the majority of B cells. The LN-1 CDw75 antibody clone is a well-established B lymphocyte marker and detects CDw75 on germinal center B lymphocytes and leukemias/lymphomas and other tissues (Epstein, 1984). The antibody is highly published and widely recognized as a reliable and robust CDw75 antibody for identifying or confirming a B cell phenotype in known lymphoid tissues.

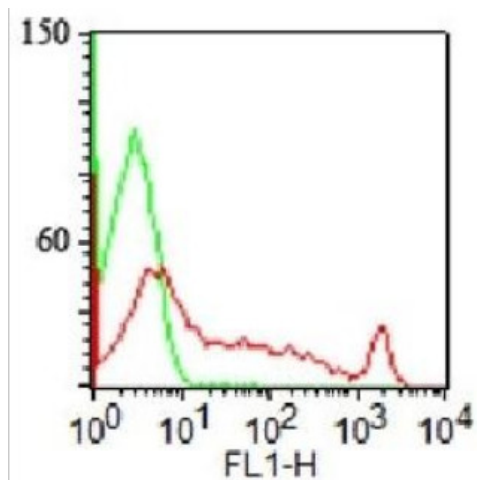
Overall, the analysis of lymphocyte populations in human lymphoid tissues is greatly facilitated by using antibody markers against lymphoid differentiation antigens such as CDw75. The CDw75 antibody may be used in of itself or as part of an antibody panel to localize lymphocyte subsets in the lymph node, spleen, and thymus as well as for immunophenotypic characterization of malignancies.

However, it is important to note that CD molecules like CDw75 are typically not strictly specific for a single hematopoietic lineage and a considerable number are not leukocyte restricted (Moller, 1991). In this regard, CDw75 is also expressed on a large spectrum of nonlymphoid cells (reviewed in Epstein, 1984 & Moller, 1991). The spectrum of CDw75 antibody reactivity includes RBC precursors of bone marrow, epithelium of kidney, breast, prostate, pancreas, and lung, glioblastomas, astrocytomas, colon carcinomas and Reed-Sternberg cells in Hodgkin's lymphoma.

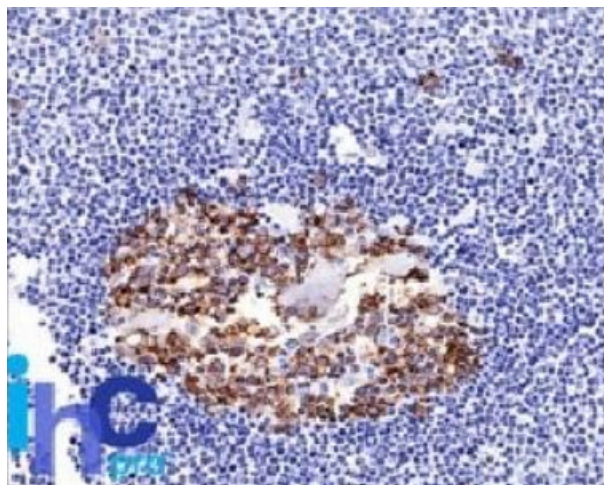
The activity of ST6Gal 1, the enzyme that synthesizes CDw75, may be modified during carcinogenesis and be associated with emergence of the CDw75 antigen. For example, CDw75 was found to be expressed in a subset of colon carcinomas but not in healthy disease-free nor in inflammatory colorectal mucosa (Costa-Nogueira, 2009; Villar-Portela, 2011). These results suggested that the CDw75 antibody may also be a useful antibody marker of tumor progression and malignant potential in certain solid tumors (Costa-Nogueira, 2009; Villar-Portela, 2011).

Synonyms:

SIAT1, B-Cell marker

Product images:

Surface staining of Human lymphocytes with CDw75 Monoclonal Antibody (LN-1) (red) and isotype control (green).PPI negative population analyzed.



Formalin-fixed, paraffin-embedded normal human Spleen stained with CDw75 Monoclonal Antibody (LN-1).