

AM32811PU-S**Monoclonal Antibody to CD74 - Purified****Alternate names:**

DHLAG, HLA class II histocompatibility antigen gamma chain, HLA-DR antigens-associated invariant chain, Ia antigen-associated invariant chain, p33

Quantity:

0.1 mg

Concentration:

0.2 mg/ml

Background:

CD74, a Type-II transmembrane protein, is a unique member of RIP-processed protein family. It consists of an extracytoplasmic domain, a transmembrane segment and an intracytoplasmic domain. It is expressed in B-cells, monocytes, macrophages and other Class II MHC expressing cells. CD74 associates with alpha and beta chains of HLA-DR (MHC class II) and directs intracellular sorting of MHC class II molecules. It has a prominent role in antigen presentation and as an accessory signaling molecule. Cell-surface CD74 binds to MIF and its expression is required for MIF-mediated ERK1/2-phosphorylation, PGE2 production and cell proliferation. CD74 regulates B-cell differentiation and acts as a survival receptor through activation of NF- κ B p65/RelA homodimer. Pathological role of CD74 has been identified in different cancers including Multiple Myeloma.

Uniprot ID:

[P04233](#)

NCBI:

[NP_001020329](#)

GeneID:

[972](#)

Host / Isotype:

Mouse / IgG1

Recommended Isotype

SM10P (for use in human samples), AM03095PU-N

Controls:**Clone:**

LN2

Immunogen:

SU-DHL-4 lymphoma cells.

Format:

State: Liquid purified IgG fraction from Bioreactor Concentrate

Purification: Protein A/G Chromatography

Buffer System: 10 mM PBS

Preservatives: 0.05% Sodium Azide

Stabilizers: 0.05% BSA

Applications:

ELISA: For coating, Use Antibody without BSA.

Western Blot: 0.5-1 μ g/ml.

Flow Cytometry: 0.5-1 μ g/ 10^6 cells.

Immunofluorescence: 1-2 μ g/ml.

Immunoprecipitation: 1-2 μ g/500 μ g protein lysate.

Immunohistochemistry on Frozen and Paraffin Sections: 0.5-1 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 or Raji Cells. Tonsil or lymph node.

Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight:

33-41 kDa

Specificity:

This monoclonal LN2 antibody can be used for the identification of B cell lymphoma and leukemias. It also stains activated neoplastic cells in T cell lymphomas and Sternberg-reed cells.

It recognizes a protein of ~35kDa, identified as CD74 (Workshop IV).

Anti-CD74 stains predominantly germinal center lymphocytes and B-cell lymphomas, but rarely T-cell lymphomas. Anti-CD74 has been shown to be useful in differentiating atypical fibroxanthoma (-) from malignant fibrous histiocytoma (+).

Cellular Localization: Cell surface and paranuclear globular.

Negative Species: Rat.

Species Reactivity:

Tested: Human, Baboon and Mouse.

Storage:

Store undiluted at 2-8°C.

Shelf life: one year from despatch.

Product Citations:**Originator or purchased from resellers:**

1. Zheng YX, Yang M, Rong TT, Yuan XL, Ma YH, Wang ZH, et al. CD74 and macrophage migration inhibitory factor as therapeutic targets in gastric cancer. *World J Gastroenterol.* 2012 May 14;18(18):2253-61. doi: 10.3748/wjg.v18.i18.2253. PubMed PMID: 22611320.

General Readings:

1. Leng et.al *JEM* 197 (11); 1467-1476 (June 2003).

2. Becker-Herman et.al *MBC* 16 (11) 5061-5069 (November 2005).

3. Diana et.al *Blood* 107 (12) 4807-4816 (15 June 2006).

4. Ioachim HL, Pambuccian S, Giancotti F, Dorsett B. Reactivity of lung tumors with lung-derived and non-lung-derived monoclonal antibodies. *Int J Cancer Suppl.* 1994;8:132-3. PubMed PMID: 7515026.

5. Epstein AL, Marder RJ, Winter JN, Fox RI. Two new monoclonal antibodies (LN-1, LN-2) reactive in B5 formalin-fixed, paraffin-embedded tissues with follicular center and mantle zone human B lymphocytes and derived tumors. *J Immunol.* 1984 Aug;133(2):1028-36. PubMed PMID: 6376628.

6. Marder RJ, Variakojis D, Silver J, Epstein AL. Immunohistochemical analysis of human lymphomas with monoclonal antibodies to B cell and Ia antigens reactive in paraffin sections. *Lab Invest.* 1985 May;52(5):497-504. PubMed PMID: 3887032.

7. Kumar S, Kumar D, Gourley WK, Alperin JB. Sporotrichosis as a presenting manifestation of hairy cell leukemia. *Am J Hematol.* 1994 Jun;46(2):134-7. PubMed PMID: 8172180.

Pictures:

Formalin-Fixed, Paraffin-Embedded Human tonsil stained with CD74 Antibody Cat.-No AM32811PU (Clone LN2).

