OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850
UNITED STATES
Phone: +1-888-267-4436
Fax: +1-301-340-8606
techsupport@origene.com

OriGene Technologies GmbH
Schillerstr. 5
32052 Herford
GERMANY
Phone: +49-5221-34606-0
Fax: +49-5221-34606-11
info-de@origene.com

# AM32811PU-T 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:** 20 µg

**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-kB 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 Controls:** SM10P (for use in human samples), AM03095PU-N

**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 µg/ml.
**Flow Cytometry:** 0.5-1 µg/$10^6$ cells.
**Immunofluorescence:** 1-2 µg/ml.
**Immunoprecipitation:** 1-2 µg/500 µg protein lysate.
**Immunohistochemistry on Frozen and Paraffin Sections:** 0.5-1 µg/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).