

CD74 (D-6): sc-137217

BACKGROUND

The human histocompatibility leukocyte antigen (HLA) class II-associated invariant chain is composed of at least four polypeptides. One of these polypeptide chains is expressed as a membrane-bound subunit and has been designated CD74. The loading of peptide onto the class II MHC protein (MHC II) appears to be regulated by CD74, which associates with MHC II during its migration to the endosomal compartment, where class II binds peptide. CD74 is expressed by cells of both T lymphocyte and B lymphocyte lineages. In fact, CD74 is broadly expressed in normal B lymphocytes, regardless of their histocompatibility leukocyte antigen (HLA) phenotype, while a subset of peripheral T lymphocytes that are MHC II negative do not express CD74.

REFERENCES

1. McMaster, W.R., et al. 1979. Identification of Ia glycoproteins in rat thymus and purification from rat spleen. *Eur. J. Immunol.* 9: 426-433.
2. Sarker, A.B., et al. 1992. *Bauhinia purpurea*—a new paraffin section marker for Reed-Sternberg cells of Hodgkin's disease. A comparison with Leu-M1 (CD15), LN2 (CD74), peanut agglutinin, and Ber-H2 (CD30). *Am. J. Pathol.* 141: 19-23.
3. Wilson, K.M., et al. 1993. Cell-surface expression of human histocompatibility leukocyte antigen (HLA) class II-associated invariant chain (CD74) does not always correlate with cell-surface expression of HLA class II molecules. *Immunology* 79: 331-335.
4. Lu, Y., et al. 1994. Retinoblastoma protein regulation of surface CD74 (invariant chain) expression in breast carcinoma cells. *Mol. Immunol.* 31: 1365-1368.
5. Henne, C., et al. 1995. Surface expression of the invariant chain (CD74) is independent of concomitant expression of major histocompatibility complex class II antigens. *Immunology* 84: 177-182.

CHROMOSOMAL LOCATION

Genetic locus: CD74 (human) mapping to 5q32; Cd74 (mouse) mapping to 18 E1.

SOURCE

CD74 (D-6) is a mouse monoclonal antibody raised against amino acids 17-296 mapping at the C-terminus of CD74 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

CD74 (D-6) is recommended for detection of CD74 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD74 siRNA (h): sc-35023, CD74 siRNA (m): sc-35024, CD74 shRNA Plasmid (h): sc-35023-SH, CD74 shRNA Plasmid (m): sc-35024-SH, CD74 shRNA (h) Lentiviral Particles: sc-35023-V and CD74 shRNA (m) Lentiviral Particles: sc-35024-V.

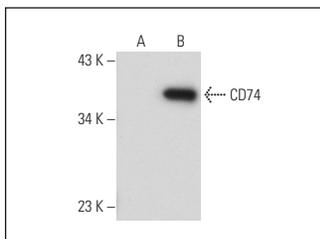
Molecular Weight of CD74 isoforms: 31-45 kDa.

Positive Controls: CD74 (h2): 293T Lysate: sc-175302, NAMALWA cell lysate: sc-2234 or HeLa whole cell lysate: sc-2200.

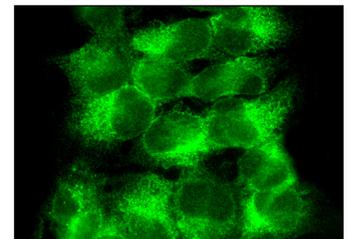
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD74 (D-6): sc-137217. Western blot analysis of CD74 expression in non-transfected: sc-117752 (A) and human CD74 transfected: sc-175302 (B) 293T whole cell lysates.



CD74 (D-6): sc-137217. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Genève, L., et al. 2014. The D-6 mouse monoclonal antibody recognizes the CD74 cytoplasmic tail. *Monoclon. Antib. Immunodiagn. Immunother.* 33: 221-227.



See **CD74 (LN-2): sc-6262** for CD74 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.