

CD74 (OX4): sc-53061

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

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3. Wilson, K.M., Labeta, M.O., Pawelec, G. and Fernandez, N. 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. *Immunol.* 79: 331-335.
4. Lu, Y., Ussery, G.D., Jacim, M., Tschickardt, M., Boss, J.M. and Blanck, G. 1994. Retinoblastoma protein regulation of surface CD74 (invariant chain) expression in breast carcinoma cells. *Mol. Immunol.* 31: 1365-1368.
5. Henne, C., Schwenk, F., Koch, N. and Moller, P. 1995. Surface expression of the invariant chain (CD74) is independent of concomitant expression of major histocompatibility complex class II antigens. *Immunology* 84: 177-182.
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7. Loachim, H.L., Pambuccian, S.E., Hekimgil, M., Giacotti, F.R. and Dorsett, B.H. 1996. Lymphoid monoclonal antibodies reactive with lung tumors. *Am. J. Surg. Pathol.* 20: 64-71.

CHROMOSOMAL LOCATION

Genetic locus: Cd74 (mouse) mapping to 18 E1.

SOURCE

CD74 (OX4) is a mouse monoclonal antibody raised against purified Ia glycoprotein of rat origin.

PRODUCT

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

CD74 (OX4) is available conjugated to either phycoerythrin (sc-53061 PE) or fluorescein (sc-53061 FITC), 200 μ g/ml, for IF, IHC(P) and FCM.

APPLICATIONS

CD74 (OX4) is recommended for detection of CD74 of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1×10^6 cells).

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

Molecular Weight of CD74 isoforms: 31-45 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

SELECT PRODUCT CITATIONS

1. Bridenbaugh, E.A., Wang, W., Srimushnam, M., Cromer, W.E., Zawieja, S.D., Schmidt, S.E., Jupiter, D.C., Huang, H.C., Van Buren, V. and Zawieja, D.C. 2013. An immunological fingerprint differentiates muscular lymphatics from arteries and veins. *Lymphat. Res. Biol.* 11: 155-171.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



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