SANTA CRUZ BIOTECHNOLOGY, INC.

CD74 (LN-2): sc-6262

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

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

SOURCE

CD74 (LN-2) is a mouse monoclonal antibody raised against SU-DHL-4 lymphoma cells.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD74 (LN-2) is available conjugated to agarose (sc-6262 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-6262 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-6262 PE), fluorescein (sc-6262 FITC), Alexa Fluor® 488 (sc-6262 AF488), Alexa Fluor® 546 (sc-6262 AF546), Alexa Fluor® 594 (sc-6262 AF594) or Alexa Fluor® 647 (sc-6262 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-6262 AF680) or Alexa Fluor® 790 (sc-6262 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD74 (LN-2) is recommended for detection of CD74 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

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: Ramos cell lysate: sc-2216, GA-10 whole cell lysate: sc-364230 or U266 whole cell lysate: sc-364800.

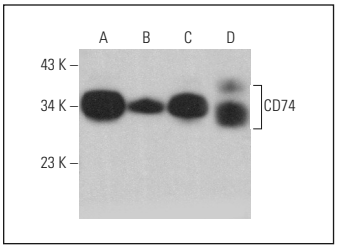
RESEARCH USE

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

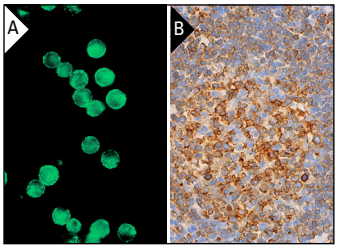
STORAGE

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

DATA



CD74 (LN-2): sc-6262. Western blot analysis of CD74 expression in Ramos (**A**), Daudi (**B**), GA-10 (**C**) and U266 (**D**) whole cell lysates.



CD74 (LN-2): sc-6262. Immunofluorescence staining of methanol-fixed Ramos cells showing membrane localization (**A**). CD74 (LN-2) HRP: sc-6262 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Fishelevich, R., et al. 2006. Ceramide-dependent regulation of human epidermal keratinocyte CD1d expression during terminal differentiation. J. Immunol. 176: 2590-2599.
2. Meyer-Siegler K.L., et al. 2006. Inhibition of macrophage migration inhibitory factor or its receptor (CD74) attenuates growth and invasion of DU-145 prostate cancer cells. J. Immunol. 177: 8730-8739.
3. Stoppe, C., et al. 2015. Interaction of MIF family proteins in myocardial ischemia/reperfusion damage and their influence on clinical outcome of cardiac surgery patients. Antioxid. Redox Signal. 23: 865-879.
4. Przybyl, L., et al. 2016. CD74-downregulation of placental macrophage-trophoblastic interactions in preeclampsia. Circ. Res. 119: 55-68.
5. Yoo, S.A., et al. 2016. MIF allele-dependent regulation of the MIF coreceptor CD44 and role in rheumatoid arthritis. Proc. Natl. Acad. Sci. USA 113: E7917-E7926.
6. Yamashita, Y., et al. 2017. HLA-DP^{84Gly} constitutively presents endogenous peptides generated by the class I antigen processing pathway. Nat. Commun. 8: 15244.
7. Korf, H., et al. 2017. MIF inhibition interferes with the inflammatory and T cell-stimulatory capacity of NOD macrophages and delays autoimmune diabetes onset. PLoS ONE 12: e0187455.
8. Anczurowski, M., et al. 2018. Mechanisms underlying the lack of endogenous processing and CLIP-mediated binding of the invariant chain by HLA-DP^{84Gly}. Sci. Rep. 8: 4804.

PROTOCOLS

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