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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-CD74 Antibody [PIN.1]

Mouse Anti-Human CD74 Monoclonal IgG
Catalog No. SMC-116

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

CD74 Antibody

Description

Mouse Anti-Human CD74 Monoclonal IgG

Species Reactivity

Human, Mouse

Applications

WB, IHC, ICC/IF, IP, FCM, FACS

Antibody Dilution

WB (1:1000), IHC (1:100), ICC/IF (1:50); optimal dilutions for assays should be determined by the user.

Host Species

Mouse

Immunogen Species

Human

Immunogen

Human CD74 invariant chain synthetic peptide

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Properties

Storage Buffer

PBS pH7.2, 50% glycerol, 0.09% sodium azide

Storage Temperature

-20ºC

Shipping Temperature

Blue Ice or 4ºC

Purification

Protein G Purified

Clonality

Monoclonal

Clone Number

PIN.1

Isotype

IgG

Specificity

Detects ~33-35kDa protein doublet corresponding to the molecular mass of the p33 and p35 forms of human CD74.

Cite This Product

Mouse Anti-Human CD74 Monoclonal, Clone PIN.1 (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SMC-116)

Certificate Of Analysis

1 µg/ml of SMC-116 was sufficient for detection of CD74 in 20 µg of PALA cell lysates by colorimetric immunolot analysis using goat anti-mouse IgG: AP as the secondary antibody.

Biological Description

Alternative Names

DHLAG Antibody, HLA DR gamma Antibody, HLADG Antibody, p33 Antibody, p35 Antibody, Protein 41 Antibody

Research Areas

Cell Signaling

Cellular Localization

Cell membrane, Endoplasmic Reticulum, Endoplasmic reticulum membrane, Endosome, Golgi apparatus, Lysosome

Accession Number

NP_001020329.1

Gene ID

972

Swiss Prot

P04233

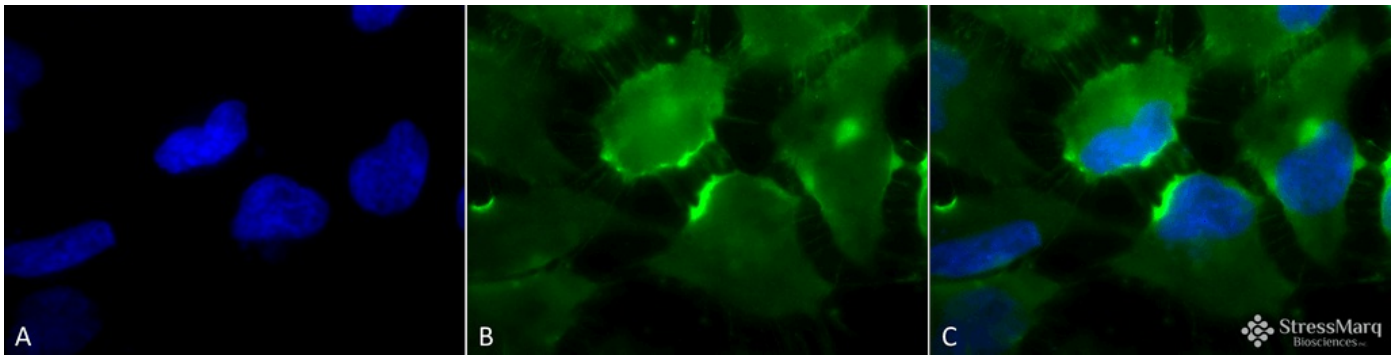
Scientific Background

CD74 is a non-polymorphic type II integral membrane protein. It has a short N-terminal cytoplasmic tail of 28 amino acids, followed by a single 24-aa transmembrane region and an approximately 150-aa lumenal domain (1). The CD74 chain is thought to function mainly as an MHC class II chaperone, which promotes ER exit of MHC class II molecules, directs them to endocytic compartments, prevents peptide binding in the ER, and contributes to peptide editing in the MHC class II compartment.
Class II MHC and Ii expression was believed to be restricted to classical antigen-presenting cells (APC); however, during inflammation, other cell types, including mucosal epithelial cells, have also been reported to express class II MHC molecules (2). Experiments that investigate cell-surface CD74 are complicated by the fact that CD74 remains on the cell surface for a very short time. The surface half-life of CD74 was calculated to be fewer than 10 minutes (3). CD74 however has also recently been shown to have a role as an accessory-signaling molecule because of its high-affinity binding to the pro-inflammatory cytokine, macrophage migration-inhibitory factor (MIF) (3). The restricted expression of CD74 by normal tissues and its very rapid internalization make CD74 an attractive therapeutic target for both cancer and immunologic diseases (4).

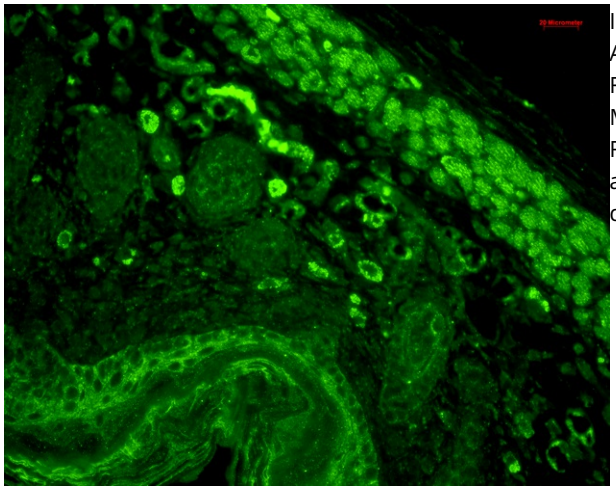
References

1. Becker-Hermann, S., Arie, G., Medvedovsky H, Kerem A, and Shachar I. (2005) Mol Bio Cell. 16(11):5061-9.
2. Barrera CA., et al (2005) J Histochem Cytochem 53 (12): 1481-9.
3. Starlets D., et al. (2006) Blood. 107 (12): 4807-4816.
4. Burton JD., et al. (2004). Clin Cancer Res. 10(19): 6606-11.
5. Denzin L.K., Hammond, C. and Cresswell, P. (1996) J. Exp. Med. 184: 2153-2165.
6. Denzin L.K., Robbins N.F., Carboy-Newcomb C. and Cresswell P. (1994) Immunity 1: 595-606.

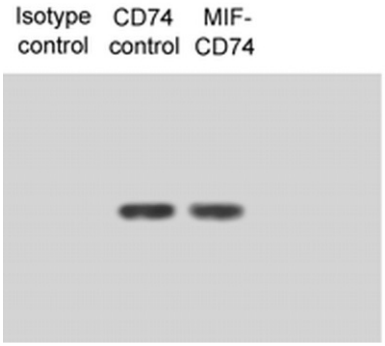
Product Images



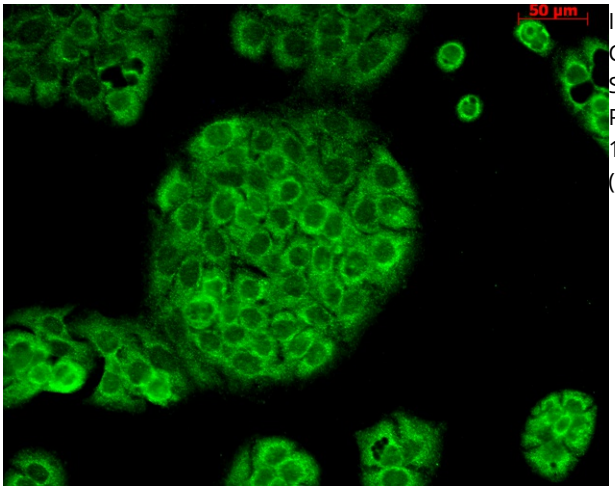
Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CD74 Monoclonal Antibody, Clone PIN 1.1 (SMC-116). Tissue: HeLa Cells. Species: Human. Fixation: 2% Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (SMC-116) at 1:100 for 12 hours at 4°C. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Cell membrane. Endoplasmic reticulum membrane. Golgi apparatus. Endosome. Lysosome. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-CD74 Antibody. (C) Composite.



Immunohistochemistry analysis using Mouse Anti-CD74 Monoclonal Antibody, Clone PIN 1.1 (SMC-116). Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (SMC-116) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Beautiful basal to suprabasal staining in epidermis, dermis, hair follicles and muscle.



Western Blot analysis of Human N87 cell lysates showing detection of CD74 protein using Mouse Anti-CD74 Monoclonal Antibody, Clone PIN 1.1 (SMC-116). Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (SMC-116) at 1:1000. Lysates treated with macrophage inhibitory factor (MIF). Courtesy of: Victor E. Reyes, University of Texas Medical Branch, USA.



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CD74 Monoclonal Antibody, Clone PIN 1.1 (SMC-116). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100% methanol for 10 minutes at -20°C. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (SMC-116) at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT. Localization: Cytoplasmic Staining.

Product Citations (2)

Western Blot

Signal-peptide-peptidase-like 2a is required for CD74 intramembrane proteolysis in human B cells.

Schneppenheim, J. et al. (2014) Biochem Biophys Res Commun. 451(1):48-53.

PubMed ID: 25035924 **Reactivity:** Human **Applications:** Western Blot

Gain in Brain Immunity in the Oldest-Old Differentiates Cognitively Normal from Demented Individuals.

Katsel, P., Tan, W. and Haroutunian, V. (2009) PLoS ONE. 4 (10): e7642.

PubMed ID: 19865478 **Reactivity:** Human **Applications:** Western Blot

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences
June 14, 2016: