



Datasheet for ABIN361789

anti-CD74 antibody



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Overview

| | |
|--------------|--|
| Quantity: | 100 µg |
| Target: | CD74 |
| Reactivity: | Human |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This CD74 antibody is un-conjugated |
| Application: | Flow Cytometry (FACS), Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunocytochemistry (ICC) |

Product Details

| | |
|-------------------|--|
| Immunogen: | Human CD74 invariant chain synthetic peptide |
| Clone: | PIN-1 |
| Isotype: | IgG1 |
| Specificity: | Detects ~33-35 kDa protein doublet corresponding to the molecular mass of the p33 and p35 forms of human CD74. |
| Cross-Reactivity: | Human, Mouse |
| Purification: | Protein G Purified |

Target Details

| | |
|---------|------|
| Target: | CD74 |
|---------|------|

Target Details

Alternative Name: [CD74 \(CD74 Products\)](#)

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 luminal 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 li 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).

Gene ID: 972

NCBI Accession: [NP_001020329](#)

UniProt: [P04233](#)

Pathways: [Positive Regulation of Immune Effector Process](#), [Production of Molecular Mediator of Immune Response](#), [Negative Regulation of intrinsic apoptotic Signaling](#), [Cancer Immune Checkpoints](#)

Application Details

Application Notes:

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

Comment: 1 µg/ml of ABIN361788 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.

Restrictions: For Research Use only

Handling

Format: Liquid

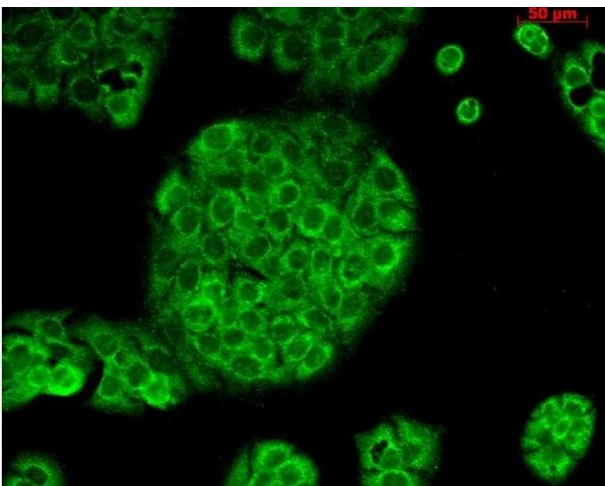
Handling

| | |
|--------------------|--|
| Concentration: | 1 mg/mL |
| Buffer: | PBS pH 7.2, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated |
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Storage: | -20 °C |
| Storage Comment: | -20°C |

Publications

- Product cited in: Schneppenheim, Hüttl, Kruchen, Fluhrer, Müller, Saftig, Schneppenheim, Martin, Schröder: "Signal-peptide-peptidase-like 2a is required for CD74 intramembrane proteolysis in human B cells." in: **Biochemical and biophysical research communications**, Vol. 451, Issue 1, pp. 48-53, (2014) ([PubMed](#)).
- Katsel, Tan, Haroutunian: "Gain in brain immunity in the oldest-old differentiates cognitively normal from demented individuals." in: **PLoS ONE**, Vol. 4, Issue 10, pp. e7642, (2009) ([PubMed](#)).

Images



Immunocytochemistry

Image 1. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CD74 Monoclonal Antibody, Clone PIN 1.1 (ABIN361788 and ABIN361789). Tissue: HaCaT cells. Species: Human. Fixation: Cold 100 % methanol for 10 minutes at -20 °C. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (ABIN361788 and ABIN361789) 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.

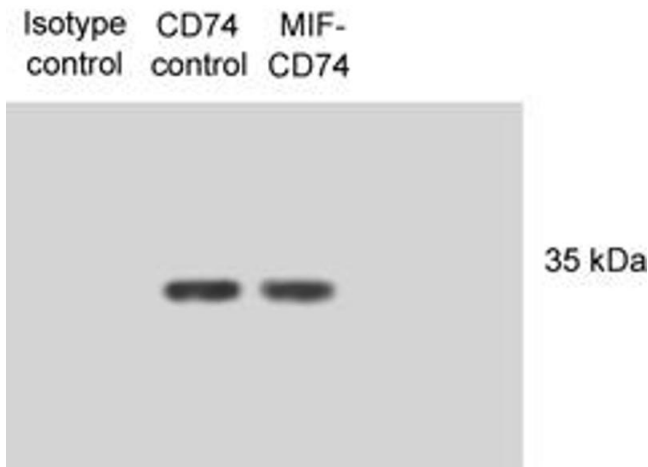
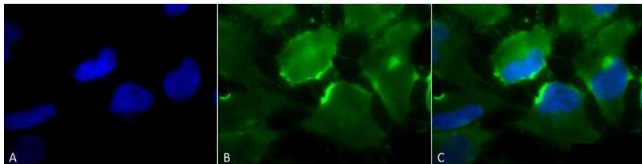


Image 2. CD 74 (PIN 1 1) N87 lysates mixed with Macrophage inhibitory factor.



Immunocytochemistry

Image 3. Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CD74 Monoclonal Antibody, Clone PIN 1.1 (ABIN361788 and ABIN361789). Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (ABIN361788 and ABIN361789) 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.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN361789.