

**CD74 Antibody**  
**CD74 Antibody, Clone 3D7**  
**Catalog # ASM10176****Specification**

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**CD74 Antibody - Product Information**

|                   |                                |
|-------------------|--------------------------------|
| Application       | <b>FC, WB</b>                  |
| Primary Accession | <a href="#">P04233</a>         |
| Other Accession   | <a href="#">NP_001020329.1</a> |
| Host              | <b>Mouse</b>                   |
| Isotype           | <b>IgG1</b>                    |
| Reactivity        | <b>Human</b>                   |
| Clonality         | <b>Monoclonal</b>              |

**Description**

Mouse Anti-Human CD74 Monoclonal IgG1

**Target/Specificity**

Detects ~33 kDa protein.

**Other Names**

DHLAG Antibody, HLA DR gamma Antibody, HLADG Antibody, p33 Antibody, p35 Antibody, Protein 41 Antibody, CD 74 Antibody, CD74 Antibody, CD74 antigen (invariant polypeptide of major histocompatibility complex, class II antigen-associated) Antibody, CD74 antigen Antibody, CD74 molecule Antibody, CD74 molecule, major histocompatibility complex, class II invariant chain Antibody, CLIP Antibody, DHLAG Antibody, Gamma chain of class II antigens Antibody, HG2A\_HUMAN Antibody, HLA class II histocompatibility antigen gamma chain Antibody, HLA DR antigens associated invariant chain Antibody, HLA DR gamma Antibody, HLA-DR antigens-associated invariant chain Antibody, HLA-DR-gamma Antibody, HLADG Antibody, HLADR antigens associated invariant chain Antibody, Ia antigen associated invariant chain Antibody, Ia antigen-associated invariant chain Antibody, Ia associated invariant chain Antibody, Ia gamma Antibody, Ii Antibody, Invariant polypeptide of major histocompatibility complex class II antigen associated Antibody, Ia-gamma Antibody, Major histocompatibility complex class II invariant chain Antibody, MHC HLA DR gamma chain Antibody, MHC HLA-DR gamma chain Antibody, p33 Antibody, p35 Antibody, Protein 41 Antibody

**Immunogen**

Human CD74 invariant chain synthetic peptide.

**Purification**

Protein G Purified

Storage **-20°C****Storage Buffer**

PBS pH 7.4, 50% glycerol, 0.9% Sodium Azide

Shipping Temperature **Blue Ice or 4°C****Certificate of Analysis**

A 1:1000 dilution of SMC-268 was sufficient for detection of CD74 in 15 µg of B-Cell Lymphoma cell line Raji by ECL immunoblot analysis using Goat Anti-Mouse IgG:HRP as the secondary Antibody.

**Cellular Localization**

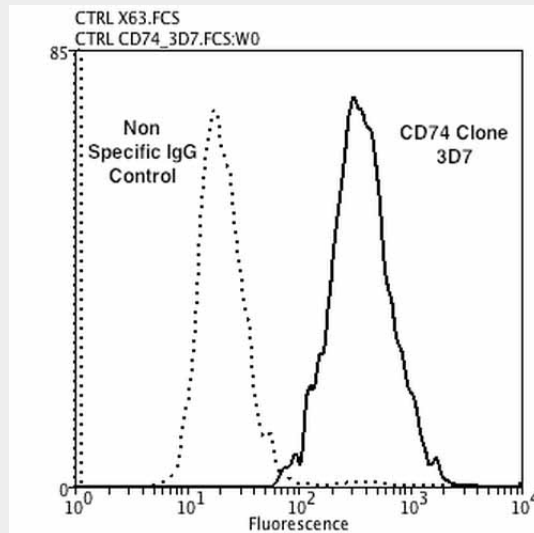
Cell Membrane | Endoplasmic Reticulum | Endoplasmic Reticulum Membrane | Golgi Apparatus | Endosome | Lysosome

## CD74 Antibody - Protocols

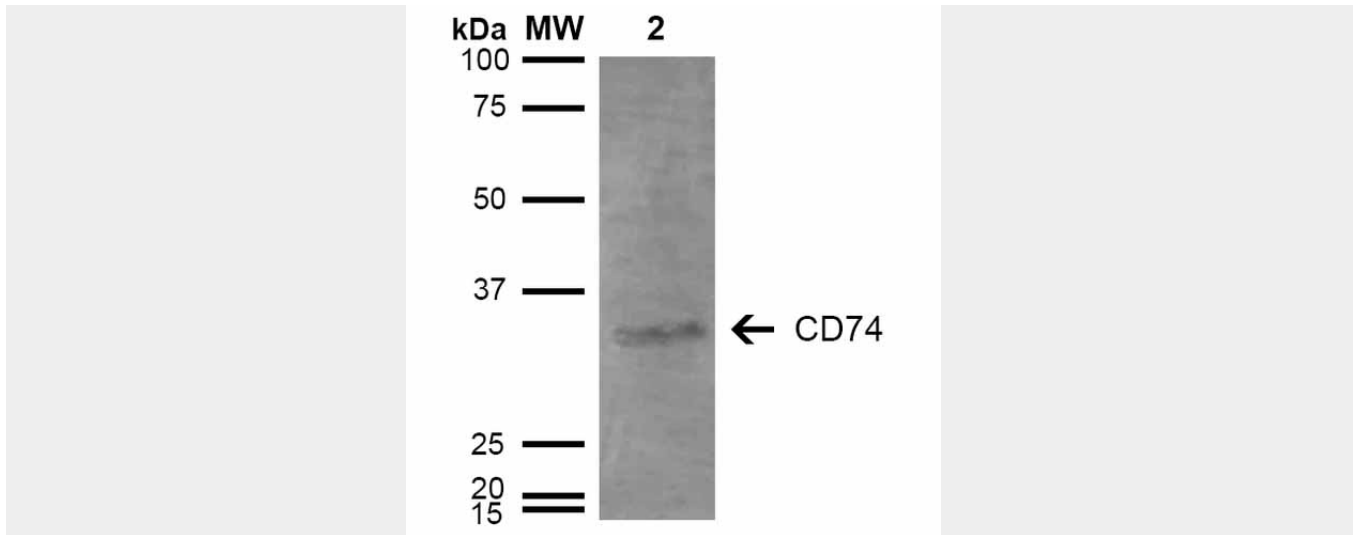
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## CD74 Antibody - Images



Flow Cytometry analysis using Mouse Anti-CD74 Monoclonal Antibody, Clone 3D7 (ASM10176). Tissue: Neuroblastoma cells (SH-SY5Y). Species: Human. Fixation: 90% Methanol. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (ASM10176) at 1:100 for 30 min on ice. Secondary Antibody: Goat Anti-Mouse: PE at 1:100 for 20 min at RT. Cells were subject to heat shock at 42°C for 2 hours and transferred to CO2 incubator at 37°C for 1 hour before trypsinization.



Western Blot analysis of Human Lymphoblastoid cell line (Raji) showing detection of 33-35 kDa CD74 protein using Mouse Anti-CD74 Monoclonal Antibody, Clone 3D7 (ASM10176). Lane 1: Molecular Weight Ladder (MW). Lane 2: Raji cell lysate. Load: 15  $\mu$ g. Block: 5% Skim Milk in TBST. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (ASM10176) at 1:1000 for 2 hours at RT. Secondary Antibody: Goat Anti-Mouse IgG: HRP at 1:1000 for 60 min at RT. Color Development: ECL solution for 5 min in RT. Predicted/Observed Size: 33-35 kDa.

### CD74 Antibody - 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 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).

### CD74 Antibody - 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.