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CD74 Antibody
CD74 Antibody, Clone 1B8
Catalog # ASM10175

Specification

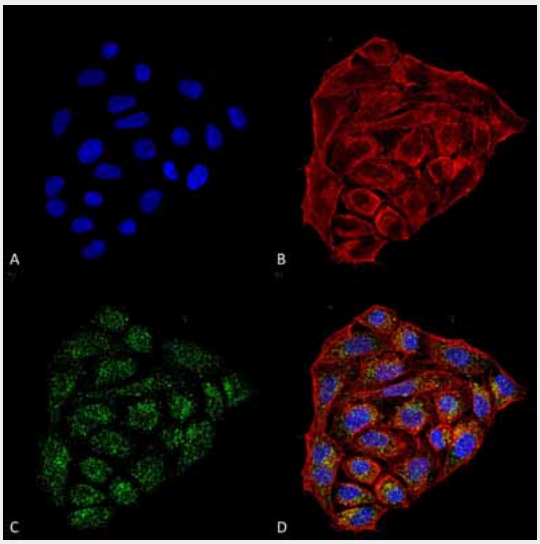
CD74 Antibody - Product Information

Application	ICC/IF, WB
Primary Accession	P04233
Other Accession	NP_001020329.1
Host	Mouse
Isotype	IgG2a
Reactivity	Human
Clonality	Monoclonal

Description
Mouse Anti-Human CD74 Monoclonal IgG2a

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



Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-CD74 Monoclonal Antibody, Clone 1B8 (ASM10175). Tissue: HeLa Cells (Human Cervical Cancer). Species: Human. Fixation: 4% Formaldehyde for 15 min at RT. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (ASM10175) at 1:100 for 60 min at RT. Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1:200 for 60 min at RT. Counterstain: Phalloidin Texas Red F-Actin stain; DAPI (blue) nuclear stain at 1:1000, 1:5000 for 60 min at RT, 5 min at RT. Localization: Cell membrane, Endoplasmic Reticulum, Golgi apparatus. Magnification: 60X. (A) DAPI (blue) nuclear stain (B) Phalloidin Texas Red F-Actin stain (C) CD74 Antibody (D) Composite.

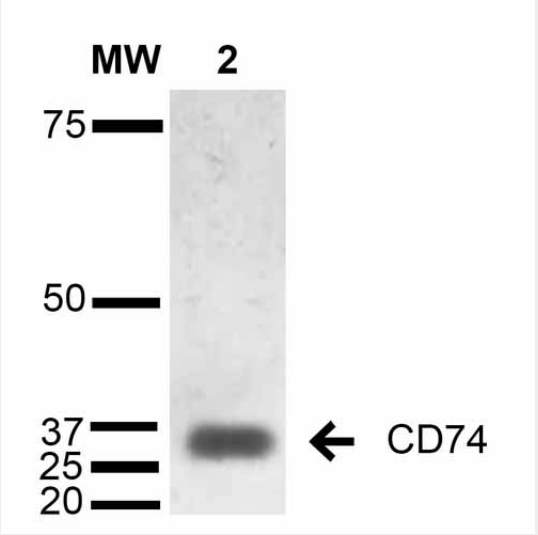
Immunogen
Human CD74 invariant chain synthetic peptide.

Purification
Protein G Purified

Storage **-20ºC**
Storage Buffer
PBS pH 7.4, 50% glycerol, 0.9% Sodium Azide

Shipping Temperature **Blue Ice or 4ºC**
Certificate of Analysis
A 1:1000 dilution of SMC-267 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



Western Blot analysis of Human Lymphoblastoid cell line (Raji) showing detection of 33-35 kDa CD74 protein using Mouse Anti-CD74 Monoclonal Antibody, Clone 1B8 (ASM10175). Lane 1: Molecular Weight Ladder (MW). Lane 2: Raji cell lysate. Load: 15 µg. Block: 5% Skim Milk in TBST. Primary Antibody: Mouse Anti-CD74 Monoclonal Antibody (ASM10175) 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 - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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 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).

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.