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Datasheet for 209-301-F12

CD74 Antibody

Overview

Description:	Anti-CD74 (MOUSE) Monoclonal Antibody - 209-301-F12
Item No.:	209-301-F12
Size:	100 µg
Applications:	WB
Reactivity:	Human
Host Species:	Mouse

Product Details

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. 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. 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). 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.
Synonyms:	mouse anti-CD74 antibody, mouse anti-Cluster of Differentiation 74 antibody, DHLAG, HLA DR gamma, HLADG, p33, p35, Protein 41 antibody, HLA class II histocompatibility antigen gamma chain, HLA-DR antigens-associated invariant chain, Ia antigen-associated invariant chain
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	PIN.1
Format:	IgG1

Target Details

Gene Name:	CD74
Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	CD74 Antibody was produced in mice by repeated immunizations with a human CD74 invariant chain synthetic peptide.
Purity/Specificity:	Anti-CD74 Antibody was protein G purified. This monoclonal antibody is specific for human CD74. A BLAST analysis was used to suggest cross-reactivity with CD74 from human based on 100% homology with the immunizing sequence. Cross-reactivity with CD97 from other sources has not been determined. Cell Signaling research.
Relevant Links:	• NCBI - NP_001020329.1 • GeneID - 972 • UniProtKB - P04233

Application Details

Tested Applications:	WB
Application Note:	Anti-CD74 Antibody is tested for WB and suitable for IP, Flow Cytometry, FACS, and IHC. Expect a band approximately ~33-35kDa protein doublet corresponding to the molecular mass of the p33 and p35 forms of human CD74 on SDS PAGE immunoblots. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
FC:	User Optimized
IF:	User Optimized
IHC:	User Optimized
IP:	User Optimized
WB:	1 µg/mL

Formulation

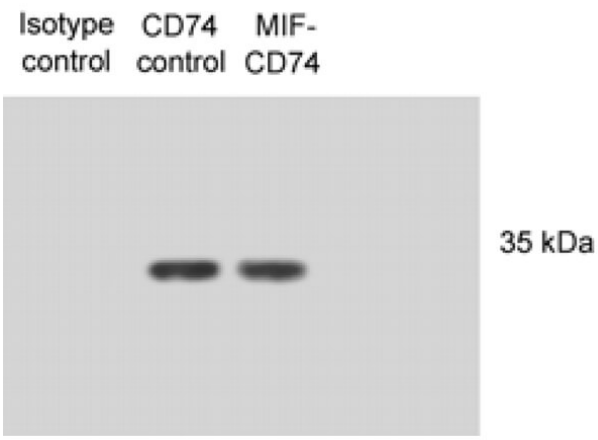
Physical State:	Liquid (sterile filtered)
Concentration:	1mg/mL by UV absorbance at 280 nm

Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
Western Blot of mouse anti-CD74 antibody. Lane 1: Isotype Control. Lane 2: CD74 Control. Lane 3: MIF-CD74. Load: 10ug. Primary antibody: CD74 at 1:1000 overnight at 4°C. Secondary antibody: Goat anti-mouse IgG at 1:40,000 for 45 min at RT. Blocked: 5% Blotto overnight at 4°C. Predicated/observed size: 33,35 kDa/35kDa for CD74.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.