

DESCRIPTION

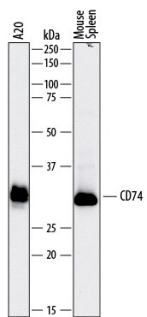
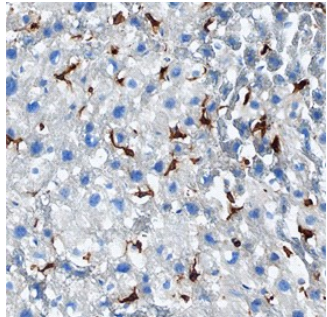
Species Reactivity	Mouse
Specificity	Detects mouse CD74 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human CD74 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse CD74 Gln56-Leu215 Accession # NP_034675
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Mouse CD74 by Western Blot. Western blot shows lysates of A20 mouse B cell lymphoma cell line and mouse spleen tissue. PVDF membrane was probed with 2 µg/mL of Sheep Anti-Mouse CD74 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7478) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for CD74 at approximately 31-34 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p>  <p>CD74 in Mouse Liver. CD74 was detected in perfusion fixed frozen sections of mouse liver using Sheep Anti-Mouse CD74 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7478) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to stellate cells. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD74 (also known as H2 class II histocompatibility antigen gamma chain and Ia antigen-associated invariant chain/Ii) is 31-41 kDa glycoprotein, member of no known protein family. It is expressed by multiple cell types, including dendritic cells, macrophages, immature and mature B cells, type II greater alveolar epithelial cells and colonic epithelium. CD74 is best known as an ER-embedded trimeric chaperone that directs MHC class II dimers through the endosome and into the cell membrane. When embedded in the endosome, it undergoes cleavage that both facilitates MHC dimer transit, and generates a cytosolic signaling fragment. It also appears on the cell surface where, in conjunction with CD44 (and possibly c-met), it binds MIF, inducing either cell proliferation, cell survival, or cytokine release. Mouse CD74 is a 279 amino acid (aa) type II transmembrane protein (SwissProt P04441). It possesses a 30 aa cytoplasmic region plus a 224 aa luminal/extracellular domain (aa 56-279) that contains one thyroglobulin type-1 repeat (aa 193-254). CD74 is known to be phosphorylated on Ser9, and occasionally undergo glycanation with chondroitin at Ser265 (on monocytes and B cells). There are multiple potential splice forms. The isoform used for antibody formation by R&D Systems, Inc. exhibits a deletion of aa 192-255 (GenBank NP_034675). Two other splice forms show either the same deletion just described coupled to a four aa substitution for aa 277-279, or a 10 aa substitution for aa 131-279. Over aa 56-215 of the NP_034675 isoform, mouse CD74 shares 86% and 69% aa sequence identity with rat and human CD74, respectively.