

CD74 Rabbit pAb

Catalog # AP98716

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	P04441
Other Accession	P04441
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	31557
Physical State	Liquid
Immunogen	Recombinant mouse CD74 protein
Epitope Specificity	56-279/279
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 thyroglobulin type-1 domain.
SUBUNIT	Homotrimer. In the endoplasmic reticulum (ER) it forms a heterononameric MHC II-Ii complex: 3 MHC class II molecules (heterodimers of an alpha and a beta subunit) bind to the CD74 homotrimer (also known as invariant chain or HLA class II histocompatibility antigen gamma chain). In the endosomal/lysosomal system, the CD74 component undergoes sequential degradation by various proteases, including CTSS and CTSL, leaving a small fragment termed CLIP (class-II-associated invariant chain peptide) attached to the MHC class II molecule (alpha-beta-CLIP complex). This processed complex interacts with HLA_DM and HLA_DO heterodimers in order to release CLIP and facilitate the binding of antigenic peptides to the MHC class II molecules.
Post-translational modifications	N- and O-glycosylated. O-glycosylated with core 1 or possibly core 8 glycans.
DISEASE	Note=A chromosomal aberration involving CD74 is found in a non-small cell lung tumor. Results in the formation of a CD74-ROS1 chimeric protein.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	CD74, also known as the MHC class II associated invariant chain (Ii), is a type II transmembrane protein which binds to the peptide binding groove of newly synthesized MHC class II alpha/beta heterodimers and prevents their premature association with endogenous polypeptides. CD74 is produced in molar excess over MHC class II and some of this is expressed by an unknown pathway on the cell surface independent of, or in association with, MHC class II molecules. The half life of CD74 on the cell surface is only 3 to 4 min after which it is internalized. It has been proposed that cell surface CD74 binds The protein encoded by this gene associates with class II major histocompatibility complex (MHC) and is an important chaperone that regulates antigen presentation for immune response. It also serves as cell surface receptor for the cytokine macrophage migration inhibitory factor (MIF) which, when bound to the encoded protein, initiates survival pathways and cell proliferation. This protein also interacts with amyloid precursor protein (APP) and suppresses the production of amyloid beta (Abeta). Multiple alternatively spliced

transcript variants encoding different isoforms have been identified.
[provided by RefSeq, Aug 2011]

Additional Information

Gene ID	16149
Other Names	CLIP; DHLAG; HLADG; II; Ia-GAMMA; p33; HG2A_HUMAN; CD74; HLA-DR antigens-associated invariant chain; Ia antigen-associated invariant chain (Ii); HG2A_MOUSE; Ia antigen-associated invariant chain (Ii Ii chain); MHC class II-associated invariant chain; CD74 molecule; CD74 antigen (invariant polypeptide of major histocompatibility complex, class II antigen-associated); CD74 molecule, major histocompatibility complex, class II invariant chain; HLA-DR-gamma; Ia-associated invariant chain; gamma chain of class II antigens; MHC HLA-DR gamma chain; class II MHC-associated invariant chain peptide
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Cd74 {ECO:0000312 MGI:MGI:96534}
Function	Plays a critical role in MHC class II antigen processing by stabilizing peptide-free class II alpha/beta heterodimers in a complex soon after their synthesis and directing transport of the complex from the endoplasmic reticulum to compartments where peptide loading of class II takes place. Enhance also the stimulation of T-cell responses through interaction with CD44.
Cellular Location	[Isoform Long]: Late endosome. Lysosome
Tissue Location	[Isoform Long]: Expressed in thymus and lymph nodes (PubMed:8977190). Expressed by antigen-presenting cells (APCs) (PubMed:11483509, PubMed:12417635).

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