



Rabbit Anti-MHC Class II/HLA DMB antibody

SL4107R

Product Name:	MHC Class II/HLA DMB
Chinese Name:	组织相容性复合体2抗体
Alias:	HLA-DPB1; MHC-2; MHC2; MHC 2; DMA; DMB; DP beta 1; DPB 1; DPB1; DRB; HLA class II histocompatibility antigen DM beta chain; HLA DMB; HLA DPB1; HLADM; HLADP1B; Major histocompatibility complex class II; Major histocompatibility complex class II DP beta 1; MHC class II antigen DMB; MHC DPB1; RING6; RING7; DPB1 HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=0.2ug/testIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	29kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human DPB1:101-210/258
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	HLA-DMB belongs to the HLA class II beta chain paralogues. This class II molecule is a heterodimer consisting of an alpha (DMA) and a beta (DMB) chain, both anchored in the membrane. It is located in intracellular vesicles. DM plays a central role in the

peptide loading of MHC class II molecules by helping to release the CLIP (class II-associated invariant chain peptide) molecule from the peptide binding site. Class II molecules are expressed in antigen presenting cells (APC: B lymphocytes, dendritic cells, macrophages). The beta chain is approximately 26-28 kDa and its gene contains 6 exons. Exon one encodes the leader peptide, exons 2 and 3 encode the two extracellular domains, exon 4 encodes the transmembrane domain and exon 5 encodes the cytoplasmic tail. [provided by RefSeq, Jul 2008]

Function:

Binds peptides derived from antigens that access the endocytic route of antigen presenting cells (APC) and presents them on the cell surface for recognition by the CD4 T-cells. The peptide binding cleft accommodates peptides of 10-30 residues. The peptides presented by MHC class II molecules are generated mostly by degradation of proteins that access the endocytic route, where they are processed by lysosomal proteases and other hydrolases. Exogenous antigens that have been endocytosed by the APC are thus readily available for presentation via MHC II molecules, and for this reason this antigen presentation pathway is usually referred to as exogenous. As membrane proteins on their way to degradation in lysosomes as part of their normal turn-over are also contained in the endosomal/lysosomal compartments, exogenous antigens must compete with those derived from endogenous components. Autophagy is also a source of endogenous peptides, autophagosomes constitutively fuse with MHC class II loading compartments. In addition to APCs, other cells of the gastrointestinal tract, such as epithelial cells, express MHC class II molecules and CD74 and act as APCs, which is an unusual trait of the GI tract. To produce a MHC class II molecule that presents an antigen, three MHC class II molecules (heterodimers of an alpha and a beta chain) associate with a CD74 trimer in the ER to form a heterononamer. Soon after the entry of this complex into the endosomal/lysosomal system where antigen processing occurs, CD74 undergoes a sequential degradation by various proteases, including CTSS and CTSL, leaving a small fragment termed CLIP (class-II-associated invariant chain peptide). The removal of CLIP is facilitated by HLA-DM via direct binding to the alpha-beta-CLIP complex so that CLIP is released. HLA-DM stabilizes MHC class II molecules until primary high affinity antigenic peptides are bound. The MHC II molecule bound to a peptide is then transported to the cell membrane surface. In B-cells, the interaction between HLA-DM and MHC class II molecules is regulated by HLA-DO. Primary dendritic cells (DCs) also express HLA-DO. Lysosomal microenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading.

Subunit:

Heterodimer of an alpha and a beta subunit; also referred as MHC class II molecule. In the endoplasmic reticulum (ER) it forms a heterononamer; 3 MHC class II molecules bind to a CD74 homotrimer (also known as invariant chain or HLA class II histocompatibility antigen gamma chain). In the endosomal/lysosomal system; CD74 undergoes sequential degradation by various proteases; leaving a small fragment termed CLIP on each MHC class II molecule. MHC class II molecule interacts with HLA DM,

and HLA_DO in B-cells, in order to release CLIP and facilitate the binding of antigenic peptides.

Subcellular Location:

Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Golgi apparatus, trans-Golgi network membrane; Single-pass type I membrane protein. Endosome membrane; Single-pass type I membrane protein. Lysosome membrane; Single-pass type I membrane protein. Note=The MHC class II complex transits through a number of intracellular compartments in the endocytic pathway until it reaches the cell membrane for antigen presentation.

Similarity:

Belongs to the MHC class II family.
Contains 1 Ig-like C1-type (immunoglobulin-like) domain.

SWISS:

P04440

Gene ID:

3115

Database links:

[Entrez Gene: 3115](#)Human

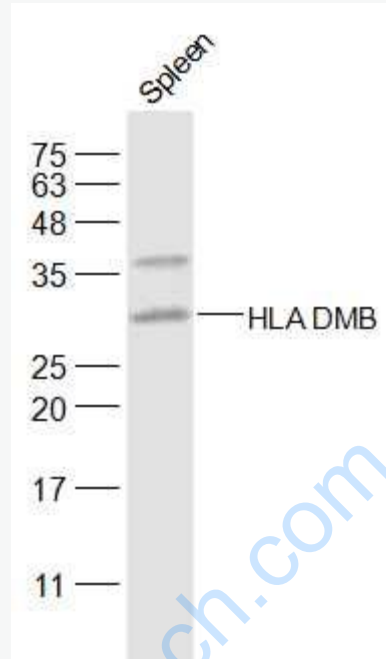
[SwissProt: P04440](#)Human

[Unigene: 485130](#)Human

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Picture:



Sample:

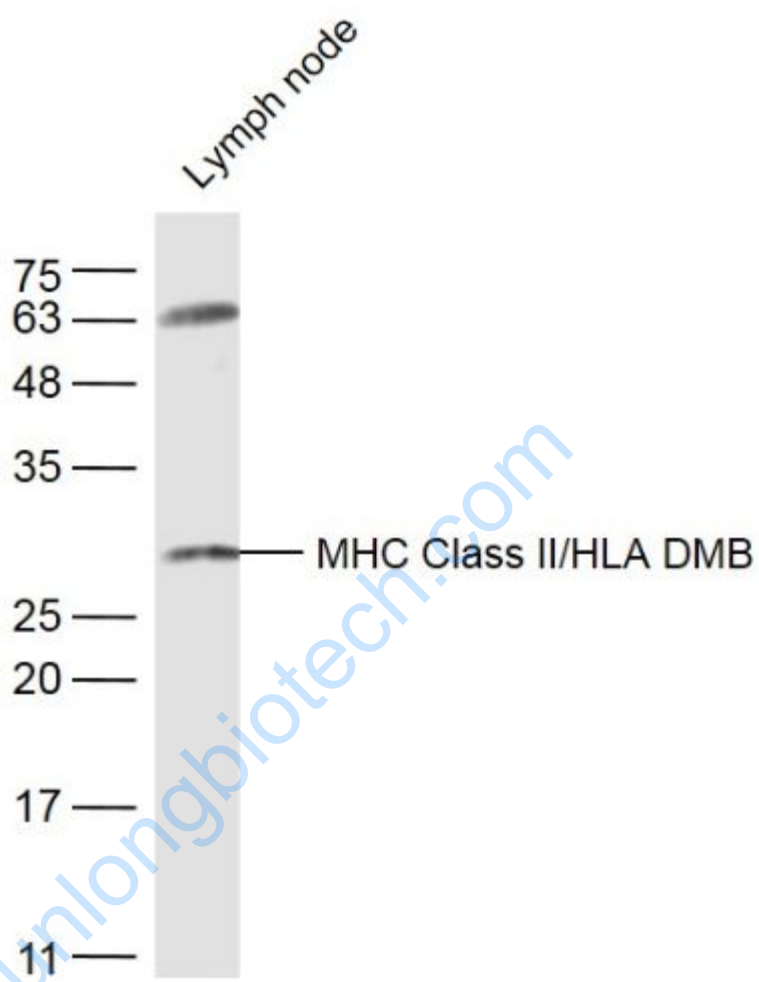
Spleen (Mouse) Lysate at 40 ug

Primary: Anti-HLA DMB (SL4107R) at 1/500 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 29 kD

Observed band size: 29 kD



Sample:

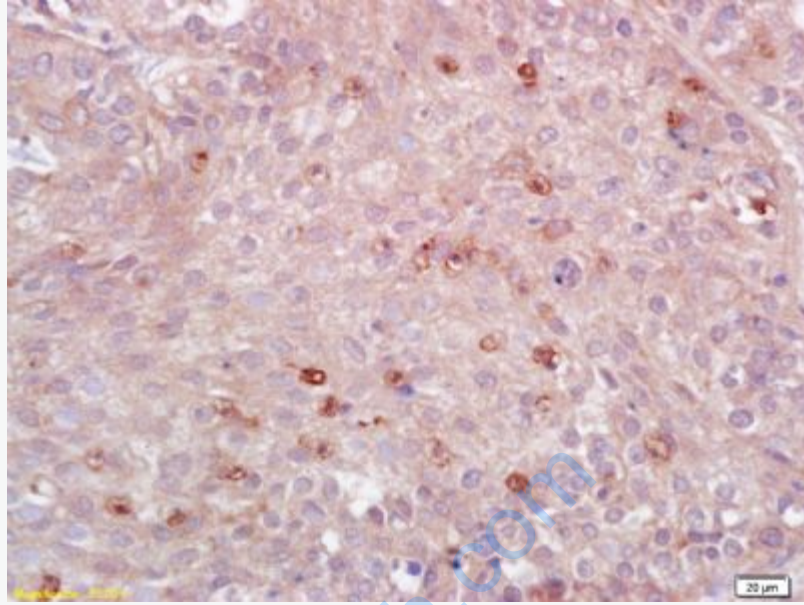
Lymph node (Mouse) Lysate at 40 ug

Primary: Anti-MHC Class II/HLA DMB (SL4107R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 29 kD

Observed band size: 29 kD

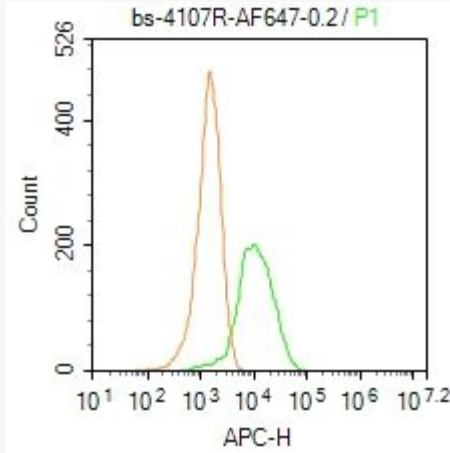


Tissue/cell: human lung carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-MHC Class II/HLA-DPB1 Polyclonal Antibody,

Unconjugated(SL4107R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: Mouse spleen.

Primary Antibody (green line): Rabbit Anti-MHC Class II/HLA DMB/AF647

Conjugated antibody (SL4107R)

Dilution: 0.2 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG-AF647 .

Protocol

The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 0.1% PBST for 20 min at -20°C. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. The cells were stained with Primary Antibody for 30 min at room temperature. Acquisition of 20,000 events was performed.