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HLA-DRB1 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5127

Specification

HLA-DRB1 Antibody (Center) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	P04229
Other Accession	Q30154
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**H=30 KDa**
Isotype	**Rabbit IgG**
Antigen Source	**HUMAN**

HLA-DRB1 Antibody (Center) - Additional Information

Antigen Region
103-137

Other Names
HLA class II histocompatibility antigen, DRB1-1 beta chain, MHC class II antigen DRB1*1, DR-1, DR1, HLA-DRB1

Dilution
IHC-P~~1:25
WB~~1:1000

Target/Specificity
This HLA-DRB1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 103-137 amino acids from the Central region of human HLA-DRB1.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
HLA-DRB1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

HLA-DRB1 Antibody (Center) - Protein Information

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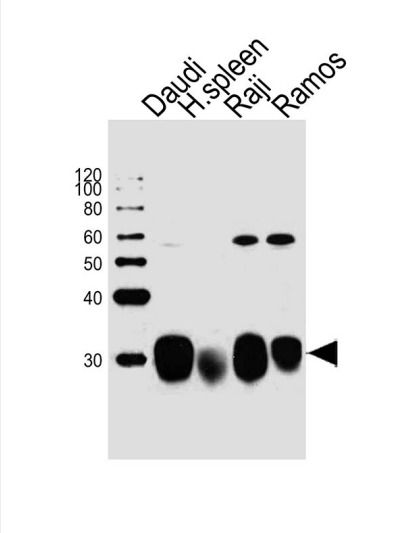
HLA-DRB1 Antibody (Center) - Protocols

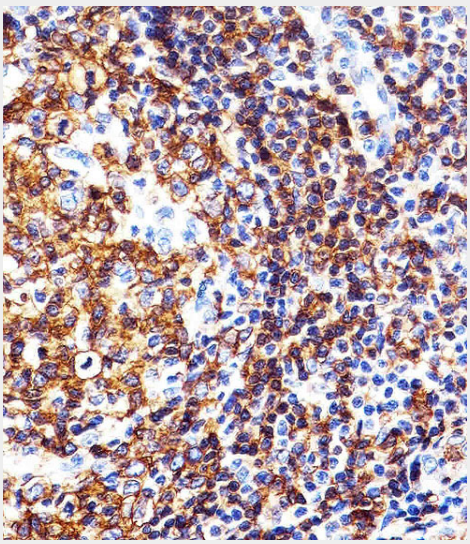
Provided below are standard protocols that you may find useful for product applications.

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

HLA-DRB1 Antibody (Center) - Images

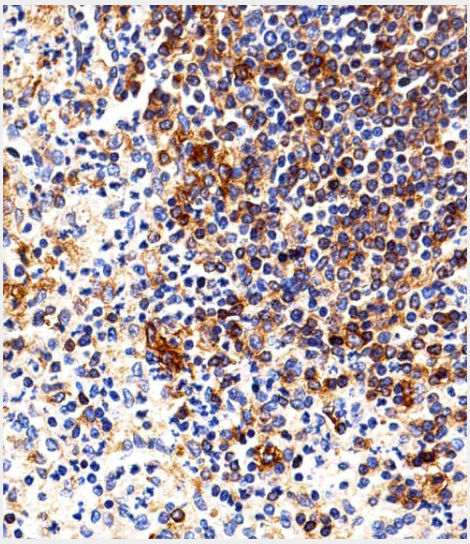


Western blot analysis of lysates from Daudi cell line,human spleen tissue,Raji,Ramos cell line (from left to right), using HLA-DRB1 Antibody (Center)(Cat. #AW5127). AW5127 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded H. tonsil section using HLA-DRB1 Antibody

(Center)(Cat#AW5127). AW5127 was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded H. spleen section using HLA-DRB1 Antibody (Center)(Cat#AW5127). AW5127 was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

HLA-DRB1 Antibody (Center) - Background

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 to 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.

HLA-DRB1 Antibody (Center) - References

Tonnelle C.,et al.EMBO J. 4:2839-2847(1985).
Bell J.I.,et al.Proc. Natl. Acad. Sci. U.S.A. 82:3405-3409(1985).

Coppin H.L.,et al.J. Immunol. 144:984-989(1990).
Raymond C.K.,et al.Genome Res. 15:1250-1257(2005).
von Salome J.,et al.Immunogenetics 59:261-271(2007).