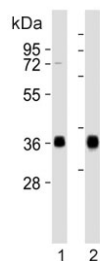


HLA-DQA1 Antibody (F54763)

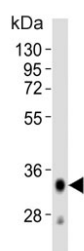
Catalog No.	Formulation	Size
F54763-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54763-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

[Bulk quote request](#)

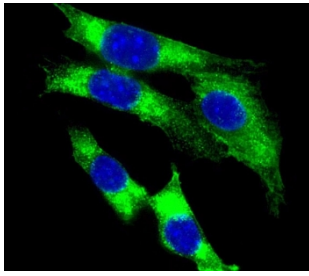
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity purified
UniProt	P01909
Localization	Cytoplasmic
Applications	Western Blot : 1:2000-1:8000 Flow Cytometry : 1:25 (1x10 ⁶ cells) Immunofluorescence : 1:25
Limitations	This HLA-DQA1 antibody is available for research use only.



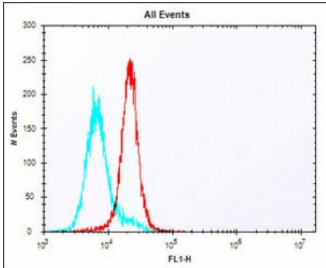
Western blot testing of human 1) Daudi and 2) Raji cell lysate with HLA-DQA1 antibody. Predicted molecular weight ~34 kDa.



Western blot testing of human spleen tissue lysate with HLA-DQA1 antibody. Predicted molecular weight ~34 kDa.



Immunofluorescent staining of fixed and permeabilized mouse NIH 3T3 cells with HLA-DQA1 antibody (green) and DAPI nuclear stain (blue).



Flow cytometry testing of fixed and permeabilized human K562 cells with HLA-DQA1 antibody; Blue=isotype control, Red= HLA-DQA1 antibody.

Description

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.

Application Notes

The stated application concentrations are suggested starting points. Titration of the HLA-DQA1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Recombinant human protein was used as the immunogen for the HLA-DQA1 antibody.

Storage

Aliquot the HLA-DQA1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

