# HLA class II histocompatibility antigen, DP beta 1 chain Polyclonal Conjugated Antibody

Catalog No: #C42587

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Package Size: #C42587-AF350 100ul #C42587-AF405 100ul #C42587-AF488 100ul #C42587-AF555 100ul #C42587-AF594 100ul #C42587-AF647 100ul #C42587-AF680 100ul #C42587-AF750 100ul #C42587-Biotin 100ul

## Description

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|---|---|
| Product Name | HLA class II histocompatibility antigen, DP beta 1 chain Polyclonal Conjugated Antibody |
| Host Species | Rabbit |
| Clonality | Polyclonal |
| Species Reactivity | Hu |
| Specificity | The antibody detects endogenous level of total HLA class II histocompatibility antigen, DP beta 1 chain polyclonal antibody. |
| Immunogen Description | Recombinant human HLA class II histocompatibility antigen, DP beta 1 chain protein |
| Conjugates | Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750 |
| Other Names | HLA class II histocompatibility antigen, DP(W4) beta chain,MHC class II antigen DPB1,HLA-DPB1,HLA-DP1B |
| Accession No. | Swiss-Prot#:P04440 |
| Uniprot | P04440 |
| GeneID | 3115; |
| Excitation Emission | AF350: 346nm/442nm<br>AF405: 401nm/421nm<br>AF488: 493nm/519nm<br>AF555: 555nm/565nm<br>AF594: 591nm/614nm<br>AF647: 651nm/667nm<br>AF680: 679nm/702nm<br>AF750: 749nm/775nm |
| Calculated MW | 26 |
| Formulation | 0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide |
| Storage | Store at 4°C in dark for 6 months |

## Application Details

Suggested Dilution:

AF350 conjugated: most applications: 1: 50 - 1: 250

AF405 conjugated: most applications: 1: 50 - 1: 250

AF488 conjugated: most applications: 1: 50 - 1: 250

AF555 conjugated: most applications: 1: 50 - 1: 250

AF594 conjugated: most applications: 1: 50 - 1: 250

AF647 conjugated: most applications: 1: 50 - 1: 250

AF680 conjugated: most applications: 1: 50 - 1: 250

AF750 conjugated: most applications: 1: 50 - 1: 250

Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1: 50 - 1: 1,000

## 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 miroenvironment has been implicated in the regulation of antigen loading into MHC II molecules, increased acidification produces increased proteolysis and efficient peptide loading.

Note: This product is for in vitro research use only