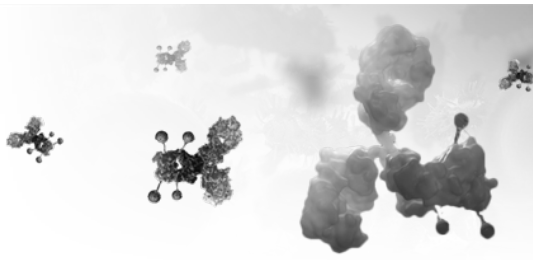

Anti-HLA-DRA (full length) polyclonal antibody (DPABH-08323)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen 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 accomodates 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 an 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.
Immunogen	Full length protein, corresponding to amino acids 1-254 of Human HLA-DR (NP_061984.2).

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Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Human
Purification	Whole antiserum
Conjugate	Unconjugated
Applications	WB, IP
Format	Liquid
Size	100 µl
Buffer	Constituent: 100% Whole serum
Preservative	None
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

GENE INFORMATION

Gene Name	HLA-DRA major histocompatibility complex, class II, DR alpha [Homo sapiens]
Official Symbol	HLA-DRA
Synonyms	HLA-DRA; major histocompatibility complex, class II, DR alpha; MLRW; HLA-DRA1; HLA class II histocompatibility antigen, DR alpha chain; MHC class II antigen DRA; MHC cell surface glycoprotein; histocompatibility antigen HLA-DR alpha;
Entrez Gene ID	3122
Protein Refseq	NP_061984.2
UniProt ID	P01903
Pathway	Adaptive Immune System; Allograft rejection; Antigen processing and presentation; Asthma
Function	MHC class II protein complex binding; MHC class II receptor activity; peptide antigen binding;

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