

## Mouse Anti-Human HLA-DPA1 Monoclonal Antibody

Mouse, Monoclonal (HLA-DPA1)

Cat. No. DMAB2500MH

Lot. No. (See product label)

### PRODUCT INFORMATION

**Antigen Description:** HLA-DPA1 belongs to the HLA class II alpha chain paralogues. This class II molecule is a heterodimer consisting of an alpha (DPA) and a beta (DPB) chain, both anchored in the membrane. It plays a central role in the immune system by presenting peptides derived from extracellular proteins. Class II molecules are expressed in antigen presenting cells. The alpha chain is approximately 33-35 kDa and its gene contains 5 exons.

**Isotype:** IgG<sub>3</sub>

**Specificity:** Recognizes a (Mr 26-34kDa) class II major histocompatibility complex (MHC) antigen. The antibody recognizes a monomorphic determinant present on cells expressing DP1, DP2, DP3, DP4, and DP5. The HLA-DP antigen is present on approximately 10% of normal peripheral blood lymphocytes but not on resting peripheral T-lymphocytes. HLA-DP is present in low density on peripheral blood monocytes and mitogen-stimulated T-lymphoblasts. reacts with most B-cell lines.

**Clone:** C8/22

**Format:** Phyco, Liquid

**Host animal:** Mouse

**Source:** Tissue culture

**Purification:** R-phycoerythrin has been covalently conjugated to a Protein G purified immunoglobulin fraction and chromatographically purified to remove unconjugated dye and antibody achieving a fluorochrome/protein (F/P) molar ratio between 0.7-1.3. R-phycoerythrin has an absorbance maximum of 565.5nm with an emission maximum of 578nm. The fluorochrome/protein molar ratio of this conjugate is 1.12.

**Application:** Used for enumeration of cells expressing HLA-DP region gene products. We recommend using 1µg to stain 1.0 x 10<sup>6</sup> cells in flow cytometric applications. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.

### PACKAGING

**Concentration:** 100µg/ml (OD280nm)

**Buffer:** 0.01M PBS, pH 7.2 containing 2mM EDTA and 1% BSA

**Preservative:** 0.1% Sodium azide

**Storage:** Store (protected from light) at 2-8°C. **DO NOT FREEZE!**

**Warning:** This product contains sodium azide, which has been classified as Xn (Harmful), in European Directive 67/548/EEC in the concentration range of 0.1 – 1.0 %. When disposing of this reagent through lead or copper plumbing, flush with copious volumes of water to prevent azide build-up in drains.

### ANTIGEN GENE INFORMATION

**Gene Name:** [HLA-DPA1 major histocompatibility complex, class II, DP alpha 1 \[Homo sapiens\]](#)

**Official Symbol:** HLA-DPA1

**Synonyms:** T1; HLADP; HLASB; HLA-DP1A; HLA-DPA1; HLA class II histocompatibility antigen, DP alpha 1 chain; DP (W3); DP(W4); MHC class II DPA; HLA-SB alpha chain; OT-THUMP00000029066; MHC class II antigen; MHC class II DP3-alpha; Primed lymphocyte test-1; MHC class II HLA-DPA1 antigen; HLA class II histocompatibility antigen, DP alpha chain

**GeneID:** [3113](#)

**mRNA Refseq:** [NM\\_033554](#)

**Protein Refseq:** [NP\\_291032](#)

**MIM:** [142880](#)

**Chromosome Location:** 6p21.3

**UniProt ID:** P20036

**Pathway:** Allograft rejection, organism-specific biosystem; Cell adhesion molecules (CAMs), organism-specific biosystem; Downstream TCR signaling, organism-specific biosystem; Generation of second messenger molecules, organism-specific biosystem; Interferon Signaling, organism-specific biosystem; Leishmaniasis, organism-specific biosystem; PD-1 signaling, organism-specific biosystem; Phosphorylation of CD3 and TCR zeta chains, organism-specific biosystem; Rheumatoid arthritis, organism-specific biosystem; Signaling in Immune system, organism-specific biosystem; TCR signaling, organism-specific biosystem; Type I diabetes mellitus, organism-specific biosystem; Viral myocarditis, organism-specific biosystem

**Function:** MHC class II receptor activity

### REFERENCES

1. Watson, J. A., et al., (1983), Nature, 304:358.
2. Bioley G *et al.* Vaccination with recombinant NY-ESO-1 protein elicits immunodominant HLA-DR52b-restricted CD4+ T cell responses with a conserved T cell receptor repertoire. *Clin Cancer Res* 15:4467-74 (2009).

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