



Magic™ Anti-HLA-DR monoclonal antibody, clone DR4/44 (DMAB5243)

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

PRODUCT INFORMATION

Specificity	Anti-HumanHLA-DP, DQ, DR Antigen, reacts with the β -chain of the $\alpha\beta$ heterodimer of all products of the gene families DP, DQ and DR. The antibody was included in the First International Workshop and Conference on Monoclonal Antibodies to Human MHC Class II Antigens and its specificity and other characteristics were ascertained by a variety of techniques, including reactivity with isolated antigen, immunoblotting, and labelling of transfected cells. In normal peripheral blood the antibody stains B cells and most monocytes but is unreactive with normal T cells and polymorphs. It will, however, stain activated T cells in peripheral blood. Anti-HLA-DP, DQ, DR Antigen does not react with erythrocytes and megakaryocytes. Immunohistochemical analysis demonstrated that Anti-HLA-DP, DQ, DR, Antigen, labels AML (5/5 cases), B cell ALL (3/3 cases), chronic leukaemias and lymphomas of B and T cell type (3/3 cases and 45/46 cases) and CML in myeloid blast crisis (1/1 case). The antibody does not label multiple myeloma (0/3 cases) but shows weak staining of a minority of cells in metastatic breast carcinomas (2/5 cases).
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Isotype	IgG1
Source/Host	Mouse
Species Reactivity	Human
Clone	DR4/44
Conjugate	Unconjugated
Procedure	Flow Cytometry Antibodies
Format	liquid form in buffer containing 1% bovine serum albumin (BSA) and 15 mmol/L NaN ₃ , pH 7.2.
Preservative	15mmol/L Sodium Azide

Storage	Store in the dark at 2°C-8°C. Do not use after expiration date stamped on vial. If reagents are stored under any conditions other than those specified, the conditions must be verified by the user. There are no obvious signs to indicate instability of this product.
Warnings	<ol style="list-style-type: none"> 1. For professional users. 2. This product contains sodium azide (NaN₃), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous, sodium azide may react with lead and copper plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent metal azide build-up in plumbing. 3. As with any product derived from biological sources, proper handling procedures should be used.

BACKGROUND

Introduction	<p>The human leucocyte antigen (HLA) system, originally discovered as the result of a transfusion reaction, is now known to play a crucial role in many areas of clinical medicine. The HLA molecules are encoded by a cluster of tightly linked genes located on the short arm of chromosome 6. Based on some of the structural and functional characteristics of the genes, the region has been divided into three: HLA class I, Class II and class III regions. The A and B genes of the HLA class II, DP, DQ and DR encode a heterodimer formed by two noncovalently associated α and β chains of approximately 34 and 28 kDa respectively. The main function of the HLA-DP, DQ and DR molecules is to present antigenic peptides, mostly of exogenous nature, to CD4⁺ T-cells. HLA molecules are also known to be associated with a variety of autoimmune, non-autoimmune and infectious diseases and to restrict the antibody response to certain antigens and vaccines. HLA-DP, DQ and DR molecules are constitutively expressed on antigen-presenting cells (APC) such as B lymphocytes, monocytes and dendritic cells but can also be detected on cytotoxic/suppressor T lymphocytes and activated granulocytes. It is uncertain whether HLA-DP, DQ and DR antigens are also expressed on activated platelets. HLA class II expression can also be induced on cells and tissues such as fibroblasts and endothelial cells as a result of activation and/or by certain cytokines such as γ-interferon, tumor necrosis factor and interleukin-10. The antigen has been found on the cell surface of leukaemic blasts from cases of B-cell acute lymphoblastic leukaemia (ALL), T-cell pre-ALL, acute myeloid leukaemia (AML) except AML-M3, and chronic B and T cell leukaemia, chronic myeloid leukaemia (CML) in blast crisis and lymphomas of B cell and cell type. HLA-DP, DQ, DR antigen is normally not present on nonhaematopoietic tumors and multiple myeloma.</p>
Keywords	<p>DP beta1 chain; DP(W4) beta chain; CD; CELIAC 1; CELIAC1; DPB1; DPB1₁; DQ A1; DRB1; DRB4; FLJ27088; FLJ27328; GSE; HLA class II histocompatibility antigen; HLA class II histocompatibility antigen DR 1 beta; HLA class II histocompatibility antigen DR alpha; H</p>