



HLA-D/DR/DQ (35): sc-53305

BACKGROUND

Major histocompatibility complex (MHC) class II molecules destined for presentation to CD4⁺ helper T cells is determined by two key events. These events include the dissociation of class II-associated invariant chain peptides (CLIP) from an antigen binding groove in MHC II- $\alpha\beta$ dimers through the activity of MHC molecules HLA-DM and -DO, and subsequent peptide antigen binding. Accumulating in endosomal/lysosomal compartments and on the surface of B cells, HLA-DM, -DO molecules regulate the dissociation of CLIP and the subsequent binding of exogenous peptides to HLA class II molecules (HLA-DR, DQ, DP and DR) by sustaining a conformation that favors peptide exchange. RFLP analysis of HLA-DM genes from rheumatoid arthritis (RA) patients suggests that certain polymorphisms are genetic factors for RA susceptibility. The $\alpha 1$ chain of HLA-DQ1 class II molecule (Ia antigen) complex can bind peptides and present them to CD4⁺ T lymphocytes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: HLA-DQA2/HLA-DRB1/HLA-DQB1 (human) mapping to 6p21.32.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

HLA-D/DR/DQ (35) is a mouse monoclonal antibody raised against tumour fragments of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HLA-D/DR/DQ (35) is available conjugated to either phycoerythrin (sc-53305 PE) or fluorescein (sc-53305 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

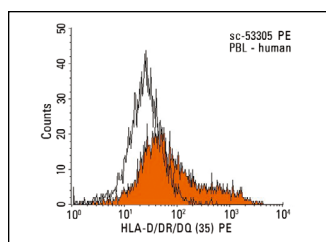
HLA-D/DR/DQ (35) is recommended for detection of HLA-D, HLA-DR and HLA-DQ of human origin by immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



HLA-D/DR/DQ (35): sc-53305. Indirect FCM analysis of human peripheral blood leukocytes stained with HLA-D/DR/DQ (35), followed by PE-conjugated goat anti-mouse IgG₃: sc-3767. Black line histogram represents the isotype control, normal mouse IgG₃: sc-3880.

SELECT PRODUCT CITATIONS

1. Xu, W., Li, S., Li, M., Yang, X., Xie, S., Lin, L., Li, G. and Zhou, H. 2021. Targeted elimination of myeloid-derived suppressor cells via regulation of the STAT pathway alleviates tumor immunosuppression in neuroblastoma. *Immunol. Lett.* 240: 31-40.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.