SANTA CRUZ BIOTECHNOLOGY, INC.

HLA-DR/DP (HL-40): sc-51617

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-α/β 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 and -DP) 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. HLA-B belongs to the HLA class I heavy chain paralogs. Class I molecules play a central role in the immune system by presenting peptides derived from the endoplasmic reticulum lumen. HLA-B and -C can form heterodimers consisting of a membrane-anchored heavy chain and a light chain (β-2-Microglobulin). Polymorphisms yield hundreds of HLA-B and -C alleles.

REFERENCES

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4. Siegmund, T., et al. 1999. HLA-DMA and HLA-DMB alleles in German patients with type 1 diabetes mellitus. Tissue Antigens 54: 291-294.
5. Arndt, S.O., et al. 2000. Functional HLA-DM on the surface of B cells and immature dendritic cells. EMBO J. 19: 1241-1251.
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7. Doebele, C.R., et al. 2000. Determination of the HLA-DM interaction site on HLA-DR molecules. Immunity 13: 517-527.
8. Louis-Plence, P., et al. 2000. The down-regulation of HLA-DM gene expression in rheumatoid arthritis is not related to their promoter polymorphism. J. Immunol. 16: 4861-4869.
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SOURCE

HLA-DR/DP (HL-40) is a mouse monoclonal antibody raised against Burkitt's lymphoma cell line Raji of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

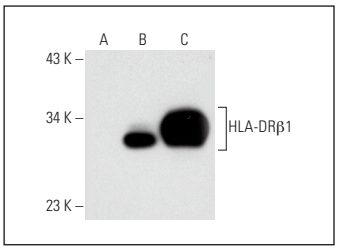
APPLICATIONS

HLA-DR/DP (HL-40) is recommended for detection of a common epitope on the β chain of HLA-DR and HLA-DP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

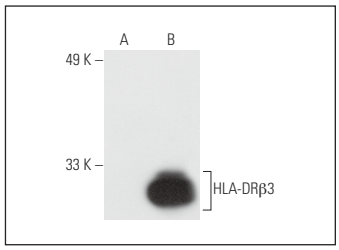
Molecular Weight of HLA-DR/DP: 30/29 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, BJAB whole cell lysate: sc-2207 or HLA-DRβ3 (h): 293T Lysate: sc-110914.

DATA



HLA-DR/DP (HL-40): sc-51617. Western blot analysis of HLA-DRβ1 expression in non-transfected 293T: sc-117752 (**A**), human HLA-DRβ1 transfected 293T: sc-115102 (**B**) and BJAB (**C**) whole cell lysates.



HLA-DR/DP (HL-40): sc-51617. Western blot analysis of HLA-DRβ3 expression in non-transfected: sc-117752 (**A**) and human HLA-DRβ3 transfected: sc-110914 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

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