

# HLA-DR (Bra30): sc-33717

## BACKGROUND

Major histocompatibility complex (MHC) class II molecules destined for presentation to CD4<sup>+</sup> 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 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 ( $\beta$ -2-Microglobulin). Polymorphisms yield hundreds of HLA-B and -C alleles.

## REFERENCES

- Horejsi, V., et al. 1986. Monoclonal antibodies against human leucocyte antigens. I. Antibodies against  $\beta$ -2-Microglobulin, immunoglobulin  $\kappa$  light chains, HLA-DR-like antigens, T8 antigen, T1 antigen, a monocyte antigen, and a pan-leucocyte antigen. *Folia Biol.* 32: 12-25.
- Horejsi, V., et al. 1986. Characterization of seven new monoclonal antibodies against human DR, DR + DP and DQ1 + DQ3 antigens. *Tissue Antigens* 28: 288-297.
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- Doebele, C.R., et al. 2000. Determination of the HLA-DM interaction site on HLA-DR molecules. *Immunity* 13: 517-527.
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## SOURCE

HLA-DR (Bra30) is a mouse monoclonal antibody raised against the REH leukemia cell line of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HLA-DR (Bra30) is available conjugated to either phycoerythrin (sc-33717 PE) or fluorescein (sc-33717 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and CFM.

## APPLICATIONS

HLA-DR (Bra30) is recommended for detection of HLA-DR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

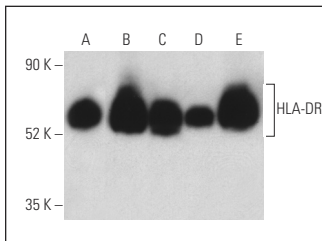
Molecular Weight of HLA-DR mature chain: 30 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, U-698-M whole cell lysate: sc-364799 or NAMALWA cell lysate: sc-2234.

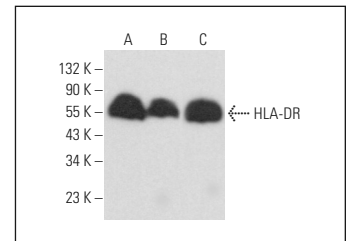
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



HLA-DR (Bra30): sc-33717. Western blot analysis of HLA-DR expression in BJAB (A), Raji (B), U-698-M (C), GA-10 (D) and IB4 (E) whole cell lysates. Detection reagent used: m-IgG<sub>2a</sub> BP-HRP: sc-542731.



HLA-DR (Bra30): sc-33717. Western blot analysis of HLA-DR expression in BJAB (A), NAMALWA (B) and IB4 (C) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **HLA-DR (520B): sc-69673** for HLA-DR antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.