

HLA-DR (Bra22): sc-33718

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.

SOURCE

HLA-DR (Bra22) is a mouse monoclonal antibody raised against cells Reh-6 (non-T, non-B leukemia cell line).

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HLA-DR (Bra22) is available conjugated to agarose (sc-33718 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33718 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33718 PE), fluorescein (sc-33718 FITC), Alexa Fluor® 488 (sc-33718 AF488), Alexa Fluor® 546 (sc-33718 AF546), Alexa Fluor® 594 (sc-33718 AF594) or Alexa Fluor® 647 (sc-33718 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33718 AF680) or Alexa Fluor® 790 (sc-33718 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

HLA-DR (Bra22) is recommended for detection of HLA-DR and HLA-DP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

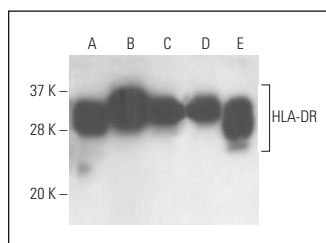
Molecular Weight of HLA-DR mature chain: 30 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, NAMALWA cell lysate: sc-2234 or HuT 78 whole cell lysate: sc-2208.

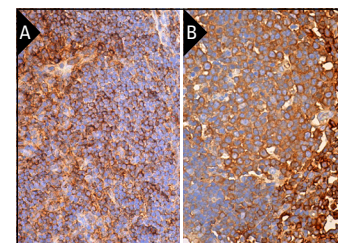
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) 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. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



HLA-DR (Bra22): sc-33718. Western blot analysis of HLA-DR expression in Raji (A), Daudi (B), U-698-M (C), NAMALWA (D) and HuT 78 (E) whole cell lysates.



HLA-DR (Bra22): sc-33718. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lymph node tissue showing membrane and cytoplasmic staining of cells in a non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat lymph node tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center (B).

SELECT PRODUCT CITATIONS

- Romieu-Mourez, R., et al. 2007. Regulation of MHC class II expression and antigen processing in murine and human mesenchymal stromal cells by IFN- γ , TGF β , and cell density. *J. Immunol.* 179: 1549-1558.
- Naujokat, C., et al. 2007. Proteasomal chymotrypsin-like peptidase activity is required for essential functions of human monocyte-derived dendritic cells. *Immunology* 120: 120-132.
- Lin, R., et al. 2016. Altered function of monocytes/macrophages in patients with autoimmune hepatitis. *Mol. Med. Rep.* 13: 3874-3880.
- Granato, M., et al. 2017. Quercetin induces apoptosis and autophagy in primary effusion lymphoma cells by inhibiting PI3K/AKT/mTOR and Stat3 signaling pathways. *J. Nutr. Biochem.* 41: 124-136.
- Li, M., et al. 2018. Genetically-modified bone mesenchymal stem cells with TGF- β 3 improve wound healing and reduce scar tissue formation in a rabbit model. *Exp. Cell Res.* 367: 24-29.
- Gilardini Montani, M.S., et al. 2019. EBV reduces autophagy, intracellular ROS and mitochondria to impair monocyte survival and differentiation. *Autophagy* 15: 652-667.

RESEARCH USE

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