

HLA-DR (520B): sc-69673



The Power to Question

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 (520B) is a mouse monoclonal antibody raised against lymphoma cells of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HLA-DR (520B) is available conjugated to agarose (sc-69673 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-69673 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69673 PE), fluorescein (sc-69673 FITC), Alexa Fluor[®] 488 (sc-69673 AF488), Alexa Fluor[®] 546 (sc-69673 AF546), Alexa Fluor[®] 594 (sc-69673 AF594) or Alexa Fluor[®] 647 (sc-69673 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-69673 AF680) or Alexa Fluor[®] 790 (sc-69673 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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 (520B) is recommended for detection of HLA-DR of human origin by Western Blotting (starting dilution 1:200, 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).

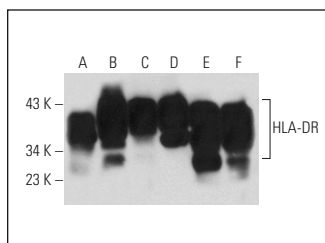
Molecular Weight of HLA-DR β chain: 27 kDa.

Positive Controls: Ramos cell lysate: sc-2216, NAMALWA cell lysate: sc-2234 or BJAB whole cell lysate: sc-2207.

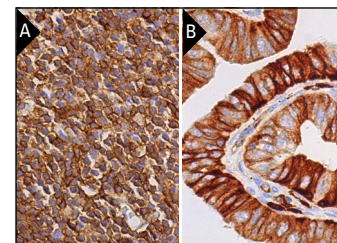
RECOMMENDED SUPPORT REAGENTS

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 (520B): sc-69673. Western blot analysis of HLA-DR expression in Ramos (A), NAMALWA (B), BJAB (C), Daudi (D), HuT 78 (E) and Raji (F) whole cell lysates.



HLA-DR (520B): sc-69673. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing membrane and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Cai, Q., et al. 2013. IRF-4-mediated CIITA transcription is blocked by KSHV encoded LANA to inhibit MHC II presentation. PLoS Pathog. 9: e1003751.
- McNally, A.K. and Anderson, J.M. 2015. Phenotypic expression in human monocyte-derived interleukin-4-induced foreign body giant cells and macrophages *in vitro*: dependence on material surface properties. J. Biomed. Mater. Res. A 103: 1380-1390.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.