SANTA CRUZ BIOTECHNOLOGY, INC.

HLA-DR (520B): sc-69673

SANTA CRUZ BIOTECHNOLOGY

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 µg 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 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-69673 HRP), 200 µg/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 µg/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 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

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 µg per 100-500 µg 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 µg per 1 x 10^6 cells).

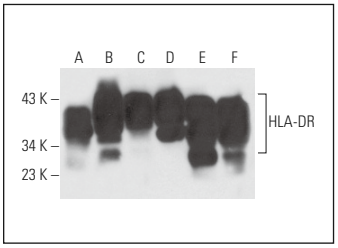
Molecular Weight of HLA-DR β chain: 27 kDa.

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

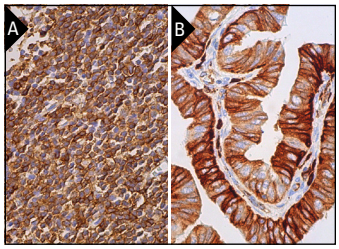
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ 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

1. 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.
2. 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.

STORAGE

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

PROTOCOLS

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