

HLA-DR (TAL 1B5): sc-53319

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 class 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.

CHROMOSOMAL LOCATION

Genetic locus: HLA-DRA/HLA-DRB1 (human) mapping to 6p21.32;
H2-Ea-ps (mouse) mapping to 17 B1.

SOURCE

HLA-DR (TAL 1B5) is a mouse monoclonal antibody raised against Bristol 8 cell line of human origin.

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 (TAL 1B5) is available conjugated to agarose (sc-53319 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53319 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53319 PE), fluorescein (sc-53319 FITC), Alexa Fluor[®] 488 (sc-53319 AF488), Alexa Fluor[®] 546 (sc-53319 AF546), Alexa Fluor[®] 594 (sc-53319 AF594) or Alexa Fluor[®] 647 (sc-53319 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53319 AF680) or Alexa Fluor[®] 790 (sc-53319 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HLA-DR (TAL 1B5) 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 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of HLA-DR α : 36 kDa.

Molecular Weight of HLA-DR β : 27 kDa.

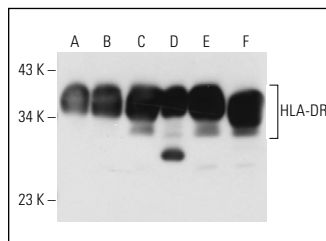
Molecular Weight of HLA-DR dimer: 63 kDa.

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

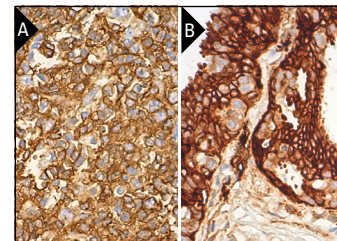
STORAGE

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

DATA



HLA-DR (TAL 1B5): sc-53319. Western blot analysis of HLA-DR expression in Ramos (A), NAMALWA (B), BJAB (C), Daudi (D), Raji (E) and HuT 78 (F) whole cell lysates.



HLA-DR (TAL 1B5): sc-53319. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node 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

- Podolin, P.L., et al. 2008. Inhibition of invariant chain processing, antigen-induced proliferative responses, and the development of collagen-induced arthritis and experimental autoimmune encephalomyelitis by a small molecule cysteine protease inhibitor. *J. Immunol.* 180: 7989-8003.
- Oksvold, M.P., et al. 2014. Expression of B-cell surface antigens in subpopulations of exosomes released from B-cell lymphoma cells. *Clin. Ther.* 36: 847-862.
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- Johnson, D.B., et al. 2016. Melanoma-specific MHC-II expression represents a tumour-autonomous phenotype and predicts response to anti-PD-1/PD-L1 therapy. *Nat. Commun.* 7: 10582.
- Klimczak, A., et al. 2017. Assessment of immunologic, proangiogenic and neurogenic properties of human peripheral nerve epineurium for potential clinical application. *Histol. Histopathol.* 32: 1197-1205.
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- Stewart, R.L., et al. 2019. A multigene assay determines risk of recurrence in patients with triple-negative breast cancer. *Cancer Res.* 79: 3466-3478.
- Fan, X., et al. 2020. Critical roles of conventional dendritic cells in autoimmune hepatitis via autophagy regulation. *Cell Death Dis.* 11: 23.

RESEARCH USE

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

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