SANTA CRUZ BIOTECHNOLOGY, INC.

HLA-DRα (DA6.147): sc-53499

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.

CHROMOSOMAL LOCATION

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

SOURCE

HLA-DRα (DA6.147) is a mouse monoclonal antibody raised against Daudi cells of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

HLA-DRα (DA6.147) is recommended for detection of HLA-DRα of mouse, rat and 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HLA-DRα siRNA (h): sc-37113, HLA-DRα siRNA (m): sc-37114, HLA-DRα shRNA Plasmid (h): sc-37113-SH, HLA-DRα shRNA Plasmid (m): sc-37114-SH, HLA-DRα shRNA (h) Lentiviral Particles: sc-37113-V and HLA-DRα shRNA (m) Lentiviral Particles: sc-37114-V.

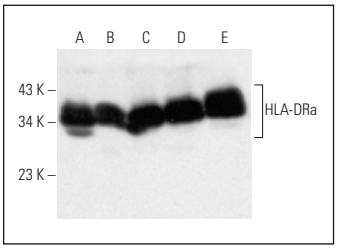
Molecular Weight of HLA-DRα: 34 kDa.

Positive Controls: HLA-DRα (h): 293T Lysate: sc-114902, Ramos cell lysate: sc-2216 or NAMALWA cell lysate: sc-2234.

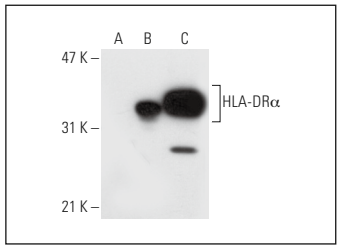
RECOMMENDED SUPPORT REAGENTS

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.

DATA



HLA-DRa (DA6.147): sc-53499. Western blot analysis of HLA-DRa expression in U-698-M (**A**), NAMALWA (**B**), Hut 78 (**C**), BJAB (**D**) and A-375 (**E**) whole cell lysates.



HLA-DRα (DA6.147): sc-53499. Western blot analysis of HLA-DRα expression in non-transfected 293T: sc-117752 (**A**), human HLA-DRα transfected 293T: sc-114902 (**B**) and Ramos (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Schönefuss, A., et al. 2010. Upregulation of cathepsin S in psoriatic keratinocytes. Exp. Dermatol. 19: e80-e88.
2. Subra, C., et al. 2011. Dendritic cells pulsed with HIV-1 release exosomes that promote apoptosis in $CD4^+$ T lymphocytes. J. Clin. Cell. Immunol. E-published.
3. Yamashita, Y., et al. 2017. HLA-DP^{84Gly} constitutively presents endogenous peptides generated by the class I antigen processing pathway. Nat. Commun. 8: 15244.
4. Vaillancourt, M., et al. 2021. Velocity gradient separation reveals a new extracellular vesicle population enriched in miR-155 and mitochondrial DNA. Pathogens 10: 526.

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.