SANTA CRUZ BIOTECHNOLOGY, INC.

# HLA-DRα (F-19): sc-14550

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.

## CHROMOSOMAL LOCATION

Genetic locus: HLA-DRA (human) mapping to 6p21.3.

## SOURCE

HLA-DRα (F-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HLA-DRα of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14550 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

HLA-DRα (F-19) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HLA-DRα (F-19) is also recommended for detection of HLA-DRα in additional species, including canine and porcine.

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

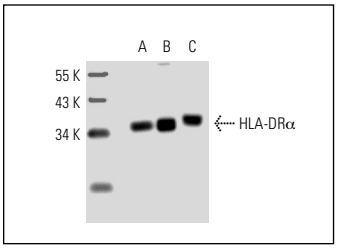
Molecular Weight of HLA-DRα: 34 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, IB4 whole cell lysate: sc-364780 or BJAB whole cell lysate: sc-2207.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA




HLA-DRα (F-19): sc-14550. Western blot analysis of HLA-DRα expression in BJAB (**A**), Raji (**B**) and IB4 (**C**) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

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