

HLA-DM β (L-14): sc-14539

BACKGROUND

Peptide (antigen) binding to major histocompatibility complex (MHC) class II molecules destined for presentation to CD4⁺ helper T cells is determined by two key events. These include the dissociation of class II-associated invariant chain peptides (CLIP) from an antigen binding groove in MHC II- γ dimers and by the activity of MHC molecules HLA-DM and -DO. 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) 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.

REFERENCES

1. Kropshofer, H., et al. 1998. A role for HLA-DO as a co-chaperone of HLA-DM in peptide loading of MHC class II molecules. *EMBO J.* 17: 2971-2981.
2. Siegmund, T., et al. 1999. HLA-DMA and HLA-DMB alleles in German patients with type 1 diabetes mellitus. *Tissue Antigens* 54: 291-294.
3. Arndt, S.O., et al. 2000. Functional HLA-DM on the surface of B cells and immature dendritic cells. *EMBO J.* 19: 1241-1251.
4. Brunet, A., et al. 2000. Functional characterization of a lysosomal sorting motif in the cytoplasmic tail of HLA-DO beta. *J. Biol. Chem.* 275: 37062-37071.
5. Doebele, C.R., et al. 2000. Determination of the HLA-DM interaction site on HLA-DR molecules. *Immunity* 13: 517-527.
6. Louis-Pence, P., et al. 2000. The down-regulation of HLA-DM gene expression in rheumatoid arthritis is not related to their promoter polymorphism. *J. Immunol.* 165: 4861-4869.
7. Toussiroit, E., et al. 2000. The association of HLA-DM genes with rheumatoid arthritis in Eastern France. *Hum. Immunol.* 61: 303-308.

CHROMOSOMAL LOCATION

Genetic locus: HLA-DMB (human) mapping to 6p21.3; H2-DMb1 (mouse) mapping to 17 B1.

SOURCE

HLA-DM β (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HLA-DM β of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-14539 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

HLA-DM β (L-14) is recommended for detection of HLA-DM β 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

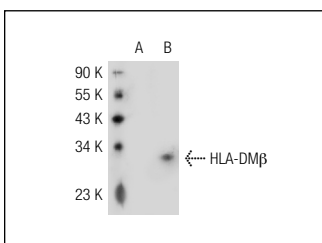
HLA-DM β (L-14) is also recommended for detection of HLA-DM β in additional species, including canine and porcine.

Suitable for use as control antibody for HLA-DM β siRNA (h): sc-42911 and HLA-DM β siRNA (m): sc-42912; and as shRNA Plasmid control antibody for HLA-DM β shRNA Plasmid (h): sc-42911-SH and HLA-DM β shRNA Plasmid (m): sc-42912-SH.

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-DM β (L-14): sc-14539. Western blot analysis of HLA-DM β expression in non-transfected: sc-117752 (A) and human HLA-DM β transfected: sc-113692 (B) 293T whole cell lysates.

RESEARCH USE

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



Try **HLA-DM β (E-8): sc-393548**, our highly recommended monoclonal alternative to HLA-DM β (L-14).