

HLA-DQ3 (2HB6): sc-53310

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- $\alpha\beta$ 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, DP and 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. The α 1 chain of HLA-DQ1 class II molecule (Ia antigen) complex can bind peptides and present them to CD4⁺ T lymphocytes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: H2-Ab1 (mouse) mapping to 17 B1.

RESEARCH USE

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

SOURCE

HLA-DQ3 (2HB6) is a mouse monoclonal antibody raised against Priess cells (an EBV-transformed B 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-DQ3 (2HB6) is available conjugated to agarose (sc-53310 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53310 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53310 PE), fluorescein (sc-53310 FITC), Alexa Fluor[®] 488 (sc-53310 AF488), Alexa Fluor[®] 546 (sc-53310 AF546), Alexa Fluor[®] 594 (sc-53310 AF594) or Alexa Fluor[®] 647 (sc-53310 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53310 AF680) or Alexa Fluor[®] 790 (sc-53310 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HLA-DQ3 (2HB6) is recommended for detection of HLA-DQ3 of mouse origin by immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and flow cytometry (1 μ g per 1 x 10⁶ cells).

Molecular Weight of HLA-DQ: 29 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

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.