



HLA-DM α (h): 293T Lysate: sc-159308

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-ly 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., Vogt, A.B., Thery, C., Armandola, E.A., Li, B.C., Moldenhauer, G., Amigorena, S. and Hämmerling, G.J. 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., Donner, H., Braun, J., Usadel, K.H. and Badenhoop, K. 1999. HLA-DMA and HLA-DMB alleles in German patients with type 1 diabetes mellitus. *Tissue Antigens* 54: 291-294.
3. Arndt, S.O., Vogt, A.B., Markovic-Plese, S., Martin, R., Moldenhauer, G., Wölpl, A., Sun, Y., Schadendorf, D., Hämmerling, G.J. and Kropshofer, H. 2000. Functional HLA-DM on the surface of B cells and immature dendritic cells. *EMBO J.* 19: 1241-1251.
4. Brunet, A., Samaan, A., Deshaies, F., Kindt, T.J. and Thibodeau, J. 2000. Functional characterization of a lysosomal sorting motif in the cytoplasmic tail of HLA-DO β . *J. Biol. Chem.* 275: 37062-37071.
5. Doebele, R.C., Busch, R., Scott, H.M., Pashine, A. and Mellins, E.D. 2000. Determination of the HLA-DM interaction site on HLA-DR molecules. *Immunity* 13: 517-527.
6. Louis-Plence, P., Kerlan-Candon, S., Morel, J., Combe, B., Clot, J., Pinet, V. and Eliaou, J.F. 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. Toussiot, E., Sauvageot, C., Chabod, J., Ferrand, C., Tiberghie, P. and Wendling, D. 2000. The association of HLA-DM genes with rheumatoid arthritis in Eastern France. *Hum. Immunol.* 61: 303-308.

CHROMOSOMAL LOCATION

Genetic locus: HLA-DMA (human) mapping to 6p21.32.

PRODUCT

HLA-DM α (h): 293T Lysate represents a lysate of human HLA-DM α transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

HLA-DM α (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HLA-DM α antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.