

HLA-DM β (h): 293T Lysate: sc-113692

BACKGROUND

HLA-DM β (HLA class II histocompatibility antigen, DM β chain), also known as DMB or RING7 (really interesting new gene 7 protein), is a 263 amino acid single-pass type I membrane protein that contains one Ig-like C1-type (immunoglobulin-like) domain and belongs to the MHC class II family. While it plays a critical role in catalyzing the release of class II-associated invariant chain peptide (CLIP) from newly synthesized MHC class II molecules, HLA-DM β also frees the peptide binding site for acquisition of antigenic peptides. In B cells, the interaction between HLA-DM and MHC class II molecules is regulated by HLA-DO. HLA-DM β exists as a heterodimer made up of an α chain (DMA) and a β chain (DMB). The gene that encodes HLA-DM β consists of approximately 6,442 bases and maps to human chromosome 6p21.32.

REFERENCES

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2. Carrington, M., et al. 1993. Characterization of HLA-DMB polymorphism. *Immunogenetics* 38: 446-449.
3. Sanderson, F., et al. 1994. Limited polymorphism in HLA-DM does not involve the peptide binding groove. *Immunogenetics* 39: 56-58.
4. Radley, E., et al. 1994. Genomic organization of HLA-DMA and HLA-DMB. Comparison of the gene organization of all six class II families in the human major histocompatibility complex. *J. Biol. Chem.* 269: 18834-18838.
5. Kim, T.G., et al. 1996. Three HLA-DMB variants in Korean patients with autoimmune diseases. *Hum. Immunol.* 46: 58-60.
6. Copier, J., et al. 1996. Targeting signal and subcellular compartments involved in the intracellular trafficking of HLA-DMB. *J. Immunol.* 157: 1017-1027.
7. Beck, S., et al. 1996. Evolutionary dynamics of non-coding sequences within the class II region of the human MHC. *J. Mol. Biol.* 255: 1-13.
8. Mosyak, L., et al. 1998. The structure of HLA-DM, the peptide exchange catalyst that loads antigen onto class II MHC molecules during antigen presentation. *Immunity* 9: 377-383.
9. Gu, H., et al. 2005. Identification of a novel HLA-DMB allele (DMB*0107) in the Korean population. *Tissue Antigens* 65: 393-394.

CHROMOSOMAL LOCATION

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

PRODUCT

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

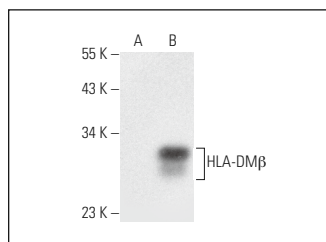
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HLA-DM β (E-8): sc-393548 is recommended as a positive control antibody for Western Blot analysis of enhanced human HLA-DM β expression in HLA-DM β transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



HLA-DM β (E-8): sc-393548. 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.

PROTOCOLS

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