

HLA-DM β (DM.K8): sc-69738

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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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.

SOURCE

HLA-DM β (DM.K8) is a mouse monoclonal antibody raised against the intracytoplasmic portion of HLA-DM β -chain of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HLA-DM β (DM.K8) is recommended for detection of HLA-DM β of 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HLA-DM β siRNA (h): sc-42911, HLA-DM β shRNA Plasmid (h): sc-42911-SH and HLA-DM β shRNA (h) Lentiviral Particles: sc-42911-V.

Molecular Weight of HLA-DM β : 29 kDa.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

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 for detailed protocols and support products.