

HLA-DO α (C-11): sc-515446

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-Ig 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 and -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. HLA-DO α (HLA class II histocompatibility antigen, DO α chain) is a 250 amino acid single-pass membrane protein that forms a heterodimer with HLA-DO β and through interaction with HLA-DM is an important modulator in the HLA class II restricted antigen presentation pathway.

REFERENCES

1. Trowsdale, J. and Kelly, A. 1985. The human HLA class II α chain gene DZ α is distinct from genes in the DP, DQ and DR subregions. *EMBO J.* 4: 2231-2237.
2. Jonsson, A.K. and Rask, L. 1989. Human class II DNA and DOB genes display low sequence variability. *Immunogenetics* 29: 411-413.
3. Young, J.A. and Trowsdale, J. 1990. The HLA-DNA (DZA) gene is correctly expressed as a 1.1 kb mature mRNA transcript. *Immunogenetics* 31: 386-388.
4. Naruse, T.K., et al. 1999. Limited polymorphism in the HLA-DOA gene. *Tissue Antigens* 53: 359-365.
5. van Lith, M., et al. 2002. Novel polymorphisms in HLA-DOA and HLA-DOB in B-cell malignancies. *Immunogenetics* 54: 591-595.

CHROMOSOMAL LOCATION

Genetic locus: HLA-DOA (human) mapping to 6p21.32; H2-Oa (mouse) mapping to 17 B1.

SOURCE

HLA-DO α (C-11) is a mouse monoclonal antibody raised against amino acids 83-127 mapping within an internal region of HLA-DO α 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.

HLA-DO α (C-11) is available conjugated to agarose (sc-515446 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515446 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515446 PE), fluorescein (sc-515446 FITC), Alexa Fluor[®] 488 (sc-515446 AF488), Alexa Fluor[®] 546 (sc-515446 AF546), Alexa Fluor[®] 594 (sc-515446 AF594) or Alexa Fluor[®] 647 (sc-515446 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515446 AF680) or Alexa Fluor[®] 790 (sc-515446 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HLA-DO α (C-11) is recommended for detection of HLA-DO α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for HLA-DO α siRNA (h): sc-95165, HLA-DO α siRNA (m): sc-105526, HLA-DO α shRNA Plasmid (h): sc-95165-SH, HLA-DO α shRNA Plasmid (m): sc-105526-SH, HLA-DO α shRNA (h) Lentiviral Particles: sc-95165-V and HLA-DO α shRNA (m) Lentiviral Particles: sc-105526-V.

Molecular Weight of HLA-DO α : 28 kDa.

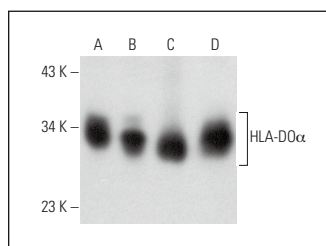
Positive Controls: U-698-M whole cell lysate: sc-364799, NAMALWA cell lysate: sc-2234 or BJAB whole cell lysate: sc-2207.

RECOMMENDED SUPPORT REAGENTS

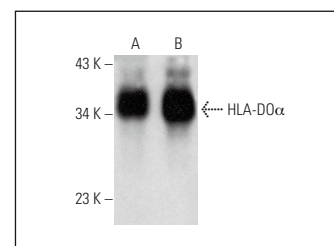
To ensure optimal results, the following support reagents are recommended:

- 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.

DATA



HLA-DO α (C-11): sc-515446. Western blot analysis of HLA-DO α expression in NAMALWA (A), BJAB (B), GA-10 (C) and U-698-M (D) whole cell lysates.



HLA-DO α (C-11): sc-515446. Western blot analysis of HLA-DO α expression in mouse PBL (A) and mouse lymph node (B) tissue extracts.

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.