



## H2-I/E $\kappa$ (5K41): sc-71203

### BACKGROUND

Major histocompatibility complex (MHC) molecules, which include human leukocyte antigens (HLAs), form an integral part of the immune response system. They are cell-surface receptors that bind foreign peptides and present them to cytotoxic T lymphocytes (CTLs). MHC class I molecules consist of two polypeptide chains, an  $\alpha$  or heavy chain and a non-covalently associated protein,  $\beta$ 2-microglobulin. MHC class II molecules consist of a non-covalent complex of an  $\alpha$  and  $\beta$  chain. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes. H2-E is an MHC class II molecule and the mouse homolog of human HLA-DR.

### REFERENCES

1. Ozato, K., Mayer, N. and Sachs, D.H. 1980. Hybridoma cell lines secreting monoclonal antibodies to mouse H-2 and Ia antigens. *J. Immunol.* 124: 533-540.
2. Klein, J. 1986. Mutations in H-2E loci. In Schook, L.B. and Lamont, S.J., eds., *Natural History of the Major Histocompatibility Complex*. New York: John Wiley & Sons, 216-218.
3. Harton, J.A., Litaker, W., Frelinger, J.A. and Bishop, G.A. 1991. Structure function analysis of the H-2 Abp gene. *Immunogenetics* 34: 358-365.
4. Neiss, U. and Reske, K. 1994. Non-coordinate synthesis of MHC class II proteins and invariant chains by epidermal Langerhans cells derived from short-term *in vitro* culture. *Int. Immunol.* 6: 61-71.
5. Roy, M., Aruffo, A., Ledbetter, J., Linsley, P., Kehry, M. and Noelle, R. 1995. Studies on the interdependence of gp39 and B7 expression and function during antigen-specific immune responses. *Eur. J. Immunol.* 25: 596-603.
6. Farr, A., DeRoos, P.C., Eastmaan, S. and Rudensky, A.Y. 1996. Differential expression of CLIP:MHC class II and conventional endogenous peptide: MHC class II complexes by thymic epithelial cells and peripheral antigen-presenting cells. *Eur. J. Immunol.* 26: 3185-3193.
7. Scott, D., Addey, C., Ellis, P., James, E., Mitchell, M.J., Saut, N., Jurcevic, S. and Simpson, E. 2000. Dendritic cells permit identification of genes encoding MHC class II-restricted epitopes of transplantation antigens. *Immunity* 12: 711-720.
8. Johnson, E.A., Silveira, P., Chapman, H.D., Leiter, E.H. and Serreze, D.V. 2001. Inhibition of autoimmune diabetes in nonobese diabetic mice by transgenic restoration of H2-E MHC class II expression: additive, but unequal, involvement of multiple APC subtypes. *J. Immunol.* 167: 2404-2410.
9. Pennesi, G., Mattapallil, M.J., Sun, S.H., Avichezer, D., Silver, P.B., Karabekian, Z., David, C.S., Hargrave, P.A., McDowell, J.H., Smith, W.C., Wiggert, B., Donoso, L.A., Chan, C.C. and Caspi, R.R. 2003. A humanized model of experimental autoimmune uveitis in HLA class II transgenic mice. *J. Clin. Invest.* 111: 1171-1180.

### SOURCE

H2-I/E $\kappa$  (5K41) is a mouse monoclonal antibody raised against C3H skin graft and splenocytes of mouse origin.

### PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

H2-I/E $\kappa$  (5K41) is available conjugated phycoerythrin (sc-71203 PE, 100 tests in 2 ml), for IF, IHC(P) and FCM.

### APPLICATIONS

H2-I/E $\kappa$  (5K41) is recommended for detection of H2-I/E $\kappa$  of mouse origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells); may cross-react with rat class II alloantigen RT1D.

### 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](http://www.scbt.com) for detailed protocols and support products.