

# H2-I/Ad $\beta$ (5K43): sc-71202

## BACKGROUND

Major histocompatibility complex (MHC) molecules 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-I/Ad $\beta$  is a MHC class II  $\beta$  chain precursor.

## REFERENCES

- Ozato, K. and Sachs, D.H. 1981. Monoclonal antibodies to mouse MHC antigens. III. Hybridoma antibodies reacting to antigens of the H-2b haplotype reveal genetic control of isotype expression. *J. Immunol.* 126: 317-321.
- Larhammar, D., Hammerling, U., Denaro, M., Lund, T., Flavell, R.A., Rask, L. and Peterson, P.A. 1983. Structure of the murine immune response I-A  $\beta$  locus: sequence of the I-A  $\beta$  gene and an adjacent  $\beta$ -chain second domain exon. *Cell* 34: 179-188.
- Landias, D., Beck, B.N., Buerstedde, J.M., Degraw, S., Klein, D., Koch, N., Murphy, D., Pierres, M., Tada, T. and Yamamoto, K. 1986. The assignment of chain specificities for anti-Ia monoclonal L cell transfectants. *J. Immunol.* 137: 3002-3005.
- Cresswell, P. 1994. Assembly, transport, and function of MHC class II molecules. *Annu. Rev. Immunol.* 12: 259-293.
- Muhlethaler-Mottet, A., Otten, L.A., Steimle, V. and Mach, B. 1997. Expression of MHC class II molecules in different cellular and functional compartments is controlled by differential usage of multiple promoters of the transactivator CIITA. *EMBO J.* 16: 2851-2860.
- Villadangos, J.A. 2001. Presentation of antigens by MHC class II molecules: getting the most out of them. *Mol. Immunol.* 38: 329-346.
- Chaves, F.A., Richards, K.A., Torelli, A., Wedekind, J. and Sant, A.J. 2006. Peptide-binding motifs for the I-Ad binding behavior. *Biochemistry* 45: 6426-6433.

## CHROMOSOMAL LOCATION

Genetic locus: H2-Ab1 (mouse) mapping to 17 B1.

## SOURCE

H2-I/Ad $\beta$  (5K43) is a mouse monoclonal antibody raised against (C57BL/6 x DBA/2)F1 splenocytes of mouse origin.

## PRODUCT

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

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

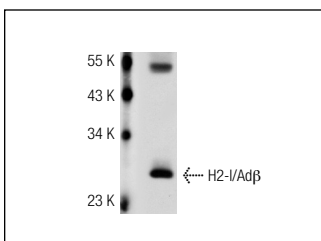
## APPLICATIONS

H2-I/Ad $\beta$  (5K43) is recommended for detection of H2-I/Ad $\beta$  of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells); may cross-react with H2-I/Ab.

Molecular Weight of H2-I/Ad $\beta$ : 30 kDa.

Positive Controls: mouse PBL whole cell lysate.

## DATA



H2-I/Ad $\beta$  (5K43): sc-71202. Western blot analysis of H2-I/Ad $\beta$  expression in mouse PBL whole cell lysate.

## SELECT PRODUCT CITATIONS

- Mathews, J.A., Gibb, D.R., Chen, B.H., Scherle, P. and Conrad, D.H. 2010. CD23 Sheddase A disintegrin and metalloproteinase 10 (ADAM10) is also required for CD23 sorting into B cell-derived exosomes. *J. Biol. Chem.* 285: 37531-37541.
- Martin, R.K., Brooks, K.B., Henningson, F., Heyman, B. and Conrad, D.H. 2014. Antigen transfer from exosomes to dendritic cells as an explanation for the immune enhancement seen by IgE immune complexes. *PLoS ONE* 9: e110609.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.