

MHC class II β (SW73.2): sc-101617

BACKGROUND

Major histocompatibility complex (MHC) molecules, also designated ovine leukocyte antigen (OLA) molecules (HLA orthologs), are cell-surface receptors that bind foreign peptides and present them to T lymphocytes. MHC class II molecules are encoded by polymorphic MHC genes and consist of a non-covalent complex of an α and β chain. Helper T lymphocytes bind antigenic peptides presented by MHC class II molecules. Human MHC class II molecules bind 13-18 amino acid antigenic peptides. HLA-DM and -DO molecules, which accumulate in endosomal/lysosomal compartments and on the surface of B cells, regulate binding of exogenous peptides to class II molecules (HLA-DR) by sustaining a conformation that favors peptide exchange. Distribution of MHC class II β in sheep tissue is similar to that found in human. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes.

REFERENCES

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- Hopkins, J., Dutia, B.M. and McConnell, I. 1986. Monoclonal antibodies to sheep lymphocytes. I. Identification of MHC class II molecules on lymphoid tissue and changes in the level of class II expression on lymph-borne cells following antigen stimulation *in vivo*. *Immunology* 59: 433-438.
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- Dukkipati, V.S., Blair, H.T., Garrick, D.J. and Murray, A. 2006. Ovar-Mhc-ovine major histocompatibility complex: role in genetic resistance to diseases. *N. Z. Vet. J.* 54: 153-160.
- Takeshima, S., Chen, S., Miki, M., Kado, M. and Aida, Y. 2008. Distribution and origin of bovine major histocompatibility complex class II DQA1 genes in Japan. *Tissue Antigens* 72: 195-205.
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SOURCE

MHC class II β (SW73.2) is a rat monoclonal antibody raised against peripheral lymph cells of ovine origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MHC class II β (SW73.2) is recommended for detection of MHC class II β chain of ovine and caprine 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).

Molecular Weight of MHC class II β : 29/33 kDa.

SELECT PRODUCT CITATIONS

- Li, H., Shi, H., Zhang, F., Xue, H., Wang, L., Tian, J., Xu, J. and Han, Q. 2020. LncRNA Tincr regulates PKC ϵ expression in a miR-31-5p-dependent manner in cardiomyocyte hypertrophy. *Naunyn Schmiedebergs Arch. Pharmacol.* 393: 2495-2506.
- Fan, W., Zhang, B., Wu, C., Wu, H., Wu, J., Wu, S., Zhang, J., Yang, X., Yang, L., Hu, Z. and Wu, X. 2021. *Plantago asiatica* L. seeds extract protects against cardiomyocyte injury in isoproterenol-induced cardiac hypertrophy by inhibiting excessive autophagy and apoptosis in mice. *Phytomedicine* 91: 153681.

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.