

MHC class I (H-300): sc-25619

BACKGROUND

Major histocompatibility complex (MHC) molecules, also designated human leukocyte antigen (HLA) molecules, are cell-surface receptors that bind foreign peptides and present them to T lymphocytes. MHC class I molecules consist of two polypeptide chains, an α or heavy chain and β -2-Microglobulin, a non-covalently associated protein. Cytotoxic T lymphocytes bind antigenic peptides presented by MHC class I molecules. Antigens that bind to MHC class I molecules are typically 8-10 residues in length and are stabilized in a peptide binding groove. 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. MHC class II molecules bind 13-18 amino acid antigenic peptides. Accumulating in endosomal/lysosomal compartments and on the surface of B cells, HLA-DM and -DO molecules regulate binding of exogenous peptides to class II molecules (HLA-DR) by sustaining a conformation that favors peptide exchange. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes.

CHROMOSOMAL LOCATION

Genetic locus: HLA-B (human) mapping to 6p21.33.

SOURCE

MHC class I (H-300) is a rabbit polyclonal antibody raised against amino acids 63-362 of MHC class I of human origin.

PRODUCT

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

Available as agarose conjugate for immunoprecipitation, sc-25619 AC, 500 μ g/0.25 ml agarose in 1 ml.

APPLICATIONS

MHC class I (H-300) is recommended for detection of MHC class I 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of MHC class I: 46 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, Raji whole cell lysate: sc-364236 or Jurkat whole cell lysate: sc-2204.

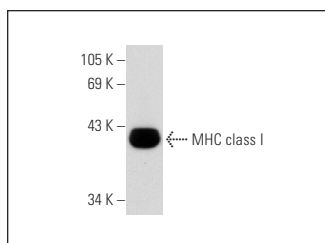
STORAGE

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

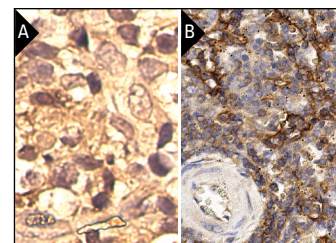
RESEARCH USE

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

DATA



MHC class I (H-300): sc-25619. Western blot analysis of MHC class I expression in CCRF-CEM whole cell lysate.



MHC class I (H-300): sc-25619. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymphoma tissue showing membrane localization (A) and human spleen tissue showing membrane staining of cells in white pulp (B).

SELECT PRODUCT CITATIONS

1. Takeuchi, T., et al. 2006. A ubiquitin ligase, skeletrophin, is a negative regulator of melanoma invasion. *Oncogene* 25: 7059-7069.
2. Ishikawa, E., et al. 2007. Clinical trial of autologous formalin-fixed tumor vaccine for glioblastoma multiforme patients. *Cancer Sci.* 98: 1226-1233.
3. Kim, Y., et al. 2008. Human cytomegalovirus UL18 utilizes US6 for evading the NK and T-cell responses. *PLoS Pathog.* 4: e1000123.
4. Lenassi, M., et al. 2010. HIV Nef is secreted in exosomes and triggers apoptosis in bystander CD4⁺ T cells. *Traffic* 11: 110-122.
5. Ramya, T.N., et al. 2010. *In situ trans* ligands of CD22 identified by glycan-protein photocross-linking-enabled proteomics. *Mol. Cell. Proteomics* 9: 1339-1351.
6. Nowicki, M., et al. 2010. Oxidized low-density lipoprotein (oxLDL)-induced cell death in dorsal root ganglion cell cultures depends not on the lectin-like oxLDL receptor-1 but on the toll-like receptor-4. *J. Neurosci. Res.* 88: 403-412.
7. Liang, Y., et al. 2010. Synthetic progestins induce growth and metastasis of BT-474 human breast cancer xenografts in nude mice. *Menopause* 17: 1040-1047.
8. Pallari, H.M., et al. 2011. Nestin as a regulator of Cdk5 in differentiating myoblasts. *Mol. Biol. Cell* 22: 1539-1549.
9. Welham, N.V., et al. 2013. Proteomic analysis of a decellularized human vocal fold mucosa scaffold using 2D electrophoresis and high-resolution mass spectrometry. *Biomaterials* 34: 669-676.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.