

HLA-E (h): 293T Lysate: sc-159325

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 α or heavy chain and a non-covalently associated protein, β -2-Microglobulin. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes. HLA-A is a MHC class I heavy chain molecule that plays a central role in the immune system by presenting peptides derived from the endoplasmic reticulum lumen. HLA-B and HLA-C are proteins encoded by closely related genes that also exist in the MHC class I. HLA-E belongs to the HLA class I heavy chain paralogs. HLA-E is a heterodimer consisting of a heavy chain and a light chain. The heavy chain is anchored in the membrane. HLA-E binds a restricted subset of peptides derived from the leader peptides of other class I molecules.

REFERENCES

1. Menier, C., et al. 2003. Characterization of monoclonal antibodies recognizing HLA-G or HLA-E: new tools to analyze the expression of nonclassical HLA class I molecules. *Hum. Immunol.* 64: 315-326.
2. Mazzarino, P., et al. 2005. Identification of effector-memory CMV-specific T lymphocytes that kill CMV-infected target cells in an HLA-E-restricted fashion. *Eur. J. Immunol.* 35: 3240-3247.
3. Palmisano, G.L., et al. 2005. HLA-E surface expression is independent of the availability of HLA class I signal sequence-derived peptides in human tumor cell lines. *Hum. Immunol.* 66: 1-12.
4. Moya-Quiles, M.R., et al. 2005. Lack of association between HLA-E polymorphism and primary cutaneous melanoma in Spanish patients. *J. Dermatol. Sci.* 40: 62-64.
5. Joly, E., et al. 2006. The orthology of HLA-E and H2-Qa1 is hidden by their concerted evolution with other MHC class I molecules. *Biol. Direct* 1: 2.
6. Bhalla, A., et al. 2006. Comparison of the expression of human leukocyte antigen (HLA)-G and HLA-E in women with normal pregnancy and those with recurrent miscarriage. *Reproduction* 131: 583-589.
7. Ishitani, A., et al. 2006. The involvement of HLA-E and -F in pregnancy. *J. Reprod. Immunol.* 69: 101-113.

CHROMOSOMAL LOCATION

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

PRODUCT

HLA-E (h): 293T Lysate represents a lysate of human HLA-E transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

HLA-E (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HLA-E antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.