

# HLA-E (S-17): sc-54608

## 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. 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 paralog. 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

- 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.
- 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.
- 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.
- 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.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: HLA-E (human) mapping to 6p21.3.

## SOURCE

HLA-E (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HLA-E of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-54608 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

HLA-E (S-17) is recommended for detection of HLA-E of human 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HLA-E siRNA (h): sc-62470, HLA-E shRNA Plasmid (h): sc-62470-SH and HLA-E shRNA (h) Lentiviral Particles: sc-62470-V.

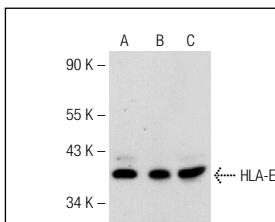
Molecular Weight of HLA-E: 40 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, BJAB whole cell lysate: sc-2207 or CCRF-CEM cell lysate: sc-2225.

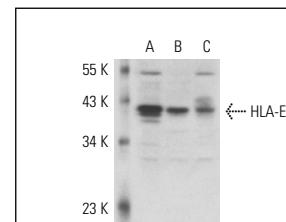
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



HLA-E (S-17): sc-54608. Western blot analysis of HLA-E expression in BJAB (A), K-562 (B) MEG-01 (C) whole cell lysates.



HLA-E (S-17): sc-54608. Western blot analysis of HLA-E expression in BJAB (A), CCRF-CEM (B) and AML-193 (C) whole cell lysates.

## RESEARCH USE

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



Try **HLA-E (3H2679): sc-71262**, our highly recommended monoclonal alternative to HLA-E (S-17).