SANTA CRUZ BIOTECHNOLOGY, INC.

HLA-G (h2): 293T Lysate: sc-159524

BACKGROUND

Major histocompatibility complex (MHC), 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 a or heavy chain, and a non-covalently associated protein, β-2-Microglobulin. 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 a and b 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.

REFERENCES

1. Fournel, S., et al. 2000. Comparative reactivity of different HLA-G monoclonal antibodies to soluble HLA-G molecules. Tissue Antigens 55: 510-518.
2. Lozano, J.M., et al. 2002. Monocytes and T lymphocytes in HIV-1-positive patients express HLA-G molecule. AIDS 16: 347-351.
3. Pangault, C., et al. 2002. Lung macrophages and dendritic cells express HLA-G molecules in pulmonary diseases. Hum. Immunol. 63: 83-90.
4. Fuzzi, B., et al. 2002. HLA-G expression in early embryos is a fundamental prerequisite for the obtainment of pregnancy. Eur. J. Immunol. 32: 311-315.
5. Boyson, J.E., et al. 2002. Disulfide bond-mediated dimerization of HLA-G on the cell surface. Proc. Natl. Acad. Sci. USA 99: 16180-16185.
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: HLA-G (human) mapping to 6p22.1.

PRODUCT

HLA-G (h2): 293T Lysate represents a lysate of human HLA-G transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HLA-G (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive HLA-G antibodies. Recommended use: 10-20 µl per lane.

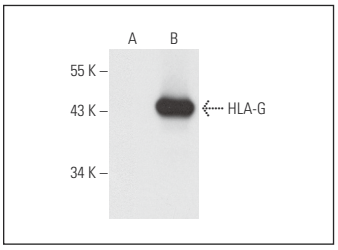
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HLA-G (4H84): sc-21799 is recommended as a positive control antibody for Western Blot analysis of enhanced human HLA-G expression in HLA-G transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

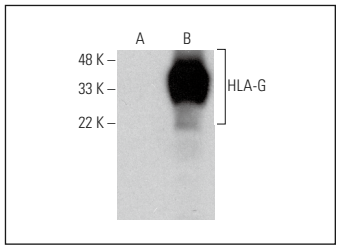
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



HLA-G (4H84): sc-21799. Western blot analysis of HLA-G expression in non-transfected: sc-117752 (**A**) and human HLA-G transfected: sc-159524 (**B**) 293T whole cell lysates.



HLA-G (4H84) HRP: sc-21799 HRP. Direct western blot analysis of HLA-G expression in non-transfected: sc-117752 (**A**) and human HLA-G transfected: sc-159524 (**B**) whole cell lysates.

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.

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.