

HLA-G (A-20): sc-17958

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 α 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 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.

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, HLA-F (human) mapping to 6p21.3.

SOURCE

HLA-G (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HLA-G 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.

Blocking peptide available for competition studies, sc-17958 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

HLA-G (A-20) is recommended for detection of HLA-G and, to a lesser extent, HLA-F of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

HLA-G (A-20) is also recommended for detection of HLA-G and, to a lesser extent, HLA-F in additional species, including equine, canine, bovine and porcine.

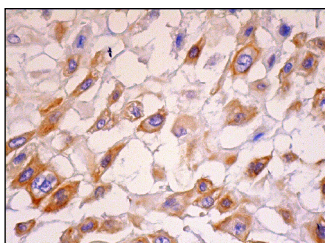
Molecular Weight of HLA-G: 39 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or Ramos cell lysate: sc-2216.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



HLA-G (A-20): sc-17958. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane and cytoplasmic staining of decidual cells.

STORAGE

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

PROTOCOLS

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