

# HLA-G (MEM-G/1): sc-51674

## 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  $\alpha$  or heavy chain, and a non-covalently associated protein,  $\beta$ -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  $\alpha$  and  $\beta$  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.

## CHROMOSOMAL LOCATION

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

## SOURCE

HLA-G (MEM-G/1) is a mouse monoclonal antibody raised against recombinant HLA-G denatured heavy chain of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HLA-G (MEM-G/1) is recommended for detection of denatured HLA-G heavy chain 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HLA-G siRNA (h): sc-42920, HLA-G shRNA Plasmid (h): sc-42920-SH and HLA-G shRNA (h) Lentiviral Particles: sc-42920-V.

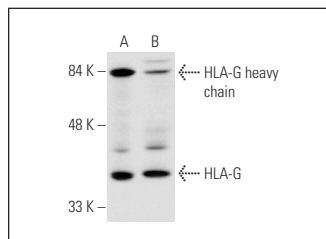
Molecular Weight of HLA-G: 39 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, JAR cell lysate: sc-2276 or HLA-G (h): 293T Lysate: sc-159408.

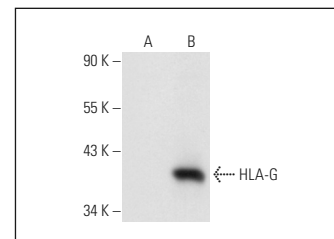
## STORAGE

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

## DATA



HLA-G (MEM-G/1): sc-51674. Western blot analysis of HLA-G expression in K-562 (A) and JAR (B) whole cell lysates.



HLA-G (MEM-G/1): sc-51674. Western blot analysis of HLA-G expression in non-transfected: sc-117752 (A) and human HLA-G transfected: sc-159408 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Cai, M.Y., et al. 2009. Human leukocyte antigen-G protein expression is an unfavorable prognostic predictor of hepatocellular carcinoma following curative resection. *Clin. Cancer Res.* 15: 4686-4693.
2. Chen, L.J., et al. 2010. Inhibition of HLA-G expression via RNAi abolishes resistance of extravillous trophoblast cell line TEV-1 to NK lysis. *Placenta* 31: 519-527.
3. Jiang, Y., et al. 2011. Association of HLA-G 3' UTR 14-bp insertion/deletion polymorphism with hepatocellular carcinoma susceptibility in a Chinese population. *DNA Cell Biol.* 30: 1027-1032.
4. Näsman, A., et al. 2013. MHC class I expression in HPV positive and negative tonsillar squamous cell carcinoma in correlation to clinical outcome. *Int. J. Cancer* 132: 72-81.
5. Majeed, S.R., et al. 2014. Clathrin light chains are required for the gyrating-clathrin recycling pathway and thereby promote cell migration. *Nat. Commun.* 5: 3891.
6. Mori, A., et al. 2016. HLA-G expression is regulated by miR-365 in trophoblasts under hypoxic conditions. *Placenta* 45: 37-41.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **HLA-G (4H84): sc-21799** for HLA-G antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.