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Datasheet for ABIN94371

## anti-HLAG antibody (Biotin)

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### Overview

Quantity:	0.1 mg
Target:	HLAG
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This HLAG antibody is conjugated to Biotin
Application:	ELISA, Flow Cytometry (FACS), Immunohistochemistry (Frozen Sections) (IHC (fro)), Immunoprecipitation (IP), Immunocytochemistry (ICC)

### Product Details

Immunogen:	Recombinant human HLA-G refolded with beta2-microglobulin and peptide.
Clone:	MEM-G-9
Isotype:	IgG1
Specificity:	The antibody MEM-G/9 reacts with an extracellular epitope on native form of human HLA-G1 on the cell surface as well as with soluble HLA-G5 isoform in its beta2-microglobulin associated form. Reactivity with HLA-G3 was also reported. The antibody MEM-G/9 is standard reagent thoroughly validated during 3rd International Conference on HLA-G (Paris, 2003).
No Cross-Reactivity:	Mouse
Cross-Reactivity (Details):	Human
Purification:	Purified antibody is conjugated with biotin LC-NHS ester under optimum conditions and unconjugated antibody and free biotin are removed by size-exclusion chromatography.

## Target Details

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Target: HLAG

Alternative Name: HLA-G ([HLAG Products](#))

Background: Major histocompatibility complex, class I, G, Human leukocyte antigen G (HLA-G), belonging to MHC class I glycoproteins, plays important roles in both physiological and pathological immunotolerance. It gives an inhibitory signal to cytotoxic T cells, NK cells, monocytes, and some other immune cells. It also induces regulatory T cells and anti-inflammatory macrophages. HLA-G is important e.g. for maternal tolerance to the fetus, and for immunomodulation in particular adult tissues, such as in cornea, pancreatic islets, thymus and other. On the other hand, it is expressed in many solid and hematologic malignancies, where it contributes to evasion of the immune surveillance. HLA-G expression pattern in cancer is an important prognostic factor regarding a poor clinical outcome. Unlike most other MHC glycoproteins, HLA-G acts as an immune checkpoint molecule rather than as an antigen presenting molecule. It concerns both transmembrane and soluble HLA-G isoforms. Among other, HLA-G can promote Th2 immunological response and downregulate Th1 immunological response. For its benefits regarding allograft tolerance, including embryo implantation, soluble HLA-G (sHLA-G) can be used as a marker of developmental potential of embryos during the process of in vitro fertilization. Similarly, sHLA-G concentrations in maternal serum are decreased in preeclampsia. Transplanted patients with increased sHLA-G serum levels have improved allograft acceptance. On the other hand, increased sHLA-G can also indicate presence of malignant (sometimes also of benign) tumor cells. Another important topic is induction of HLA-G expression (sometimes associated with shedding of HLA-G from the cell surface) by some anti-cancer or anti-viral therapies, which can weaken the therapy effect. Monitoring of HLA-G in patients thus has a wide usage.

Gene ID: 3135

UniProt: [P17693](#)

Pathways: [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Cancer Immune Checkpoints](#)

## Application Details

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Application Notes: Flow cytometry: Recommended dilution: 1-5 µg/mL, positive control: JEG-3 human choriocarcinoma cell line.

Immunocytochemistry: Recommended dilution: 2-5 µg/mL. For fixation details see: Emadi et al., Biotech Histochem. 2022 Feb,97(2):136-142.

## Application Details

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Immunohistochemistry: Recommended dilution: 5-10 µg/mL.

Comment: The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.

Restrictions: For Research Use only

## Handling

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Concentration: 1 mg/mL

Buffer: Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling Advice: **Do not freeze.**  
Avoid prolonged exposure to light.

Storage: 4 °C

Storage Comment: Store at 2-8°C. Do not freeze.

## Publications

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Product cited in: Zhao, Teklemariam, Hantash: "Reassessment of HLA-G isoform specificity of MEM-G/9 and 4H84 monoclonal antibodies." in: **Tissue antigens**, Vol. 80, Issue 3, pp. 231-8, (2012) ([PubMed](#)).

López, Alegre, LeMaout, Carosella, González: "Regulatory role of tryptophan degradation pathway in HLA-G expression by human monocyte-derived dendritic cells." in: **Molecular immunology**, Vol. 43, Issue 14, pp. 2151-60, (2006) ([PubMed](#)).

Gonen-Gross, Achdout, Arnon, Gazit, Stern, Horejsí, Goldman-Wohl, Yagel, Mandelboim: "The CD85J/leukocyte inhibitory receptor-1 distinguishes between conformed and beta 2-microglobulin-free HLA-G molecules." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 175, Issue 8, pp. 4866-74, (2005) ([PubMed](#)).

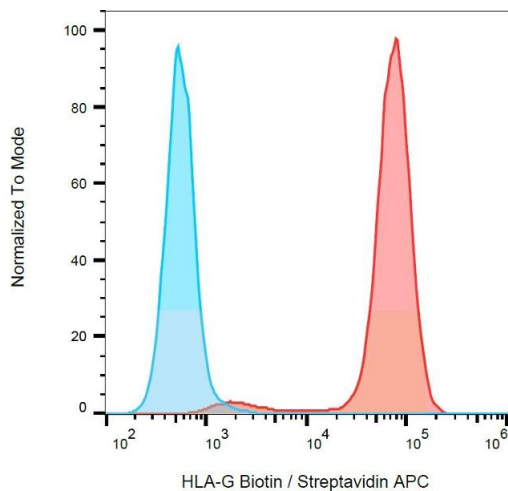
Menier, Saez, Horejsi, Martinozzi, Krawice-Radanne, Bruel, Le Danff, Reboul, Hilgert, Rabreau, Larrad, Pla, Carosella, Rouas-Freiss: "Characterization of monoclonal antibodies recognizing HLA-G or HLA-E: new tools to analyze the expression of nonclassical HLA class I molecules." in:

**Human immunology**, Vol. 64, Issue 3, pp. 315-26, (2003) ([PubMed](#)).

Lozano, González, Kindelán, Rouas-Freiss, Caballos, Dausset, Carosella, Peña: "Monocytes and T lymphocytes in HIV-1-positive patients express HLA-G molecule." in: **AIDS**, Vol. 16, Issue 3, pp. 347-51, (2002) ([PubMed](#)).

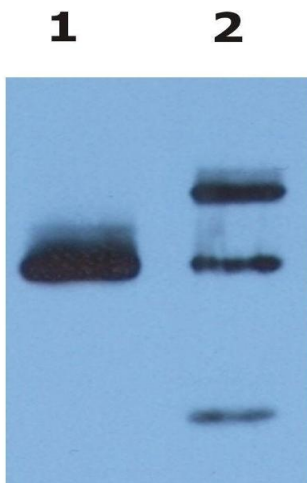
There are more publications referencing this product on: [Product page](#)

## Images



### Flow Cytometry

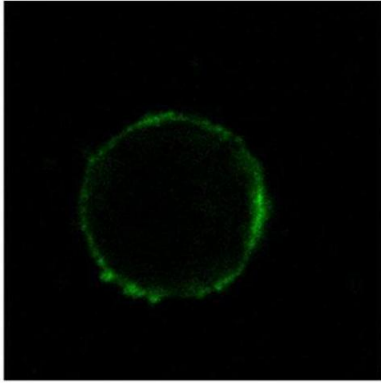
**Image 1.** Separation of HLA-G transfected LCL cells (red) from K562 cells (blue) in flow cytometry analysis (surface staining) using anti-human HLA-G (MEM-G/9) biotin antibody (concentration in sample  $4 \mu\text{g/mL}$ ) streptavidin APC.



### Immunoprecipitation

**Image 2.** Immunoprecipitation of HLA-G from HLA-G1 transfectants (LCL-HLA-G1) by anti-human HLA-G () and protein G. HLA-G was detected by anti-human HLA-G (4H84) and goat anti-mouse HRP in cell lysate (Lane 1) and in the immunoprecipitate (Lane 2).

## HLA-G



### Immunofluorescence

**Image 3.** Immunofluorescence staining of HLA-G1 transfectants (LCL-HLA-G1) using anti-human HLA-G () Alexa Fluor ® 488 Fab-fragment.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN94371.