

Datasheet for ABIN125708
anti-HLAG antibody (APC)

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Overview

Quantity:	0.1 mg
Target:	HLAG
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This HLAG antibody is conjugated to APC
Application:	Flow Cytometry (FACS)

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 activated allophycocyanin (APC) under optimum conditions and unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Target Details

Target:	HLA-G
Alternative Name:	HLA-G (HLA-G Products)
Background:	<p>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.</p>
Gene ID:	3135
UniProt:	P17693
Pathways:	Regulation of Leukocyte Mediated Immunity , Positive Regulation of Immune Effector Process , Cancer Immune Checkpoints

Application Details

Application Notes:	Flow cytometry: Recommended dilution: 1-5 µg/mL, positive control: JEG-3 human choriocarcinoma cell line.
Comment:	The purified antibody is conjugated with cross-linked Allophycocyanin (APC) under optimum conditions. The conjugate is purified by size-exclusion chromatography.

Application Details

Restrictions: For Research Use only

Handling

Concentration: 0.1 mg/mL

Buffer: Stabilizing 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. Protect from prolonged exposure to light. Do not freeze.

Publications

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](#)).

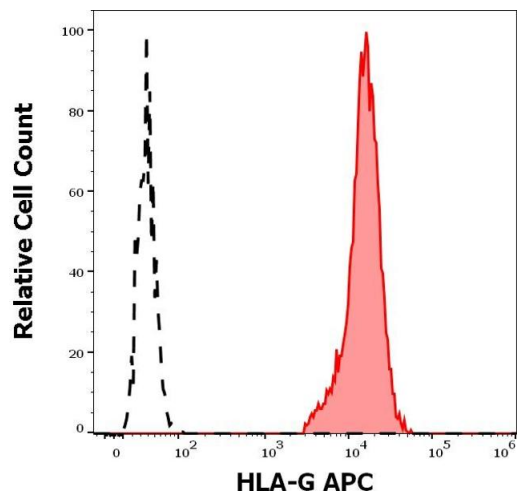
Menier, Saez, Horejsi, Martinozzi, Krawice-Radanne, Bruel, Le Danff, Reboul, Hilgert, Rabreau, Larrad, Pla, Carosella, Rouas-Freiss: "Characterization of monoclonal antibodies recognizing HLA-G or HLA-E: new tools to analyze the expression of nonclassical HLA class I molecules." in: **Human immunology**,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

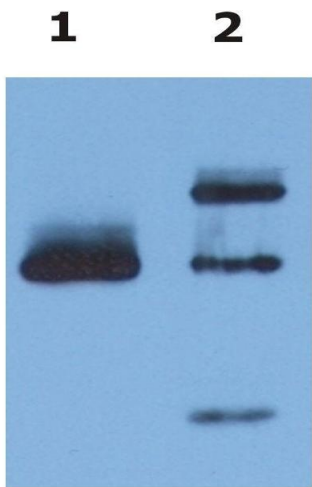


Flow Cytometry

Image 1. Separation of LCL 721.221 HLA-G transfected cells stained using anti-human HLA-G (MEM-G/9) Alexa Fluor 647 antibody (10 μ L reagent per million cells in 100 μ L of cell suspension, red-filled) from LCL 721.221 HLA-G transfected cells stained using mouse IgG1 isotype control (MOPC-21) Alexa Fluor 647 antibody (concentration in sample 1 μ g/mL, same as CD135 APC concentration, black-dashed) in flow cytometry analysis (surface staining) of LCL 721.221 HLA-G transfected cells suspension.

Immunoprecipitation

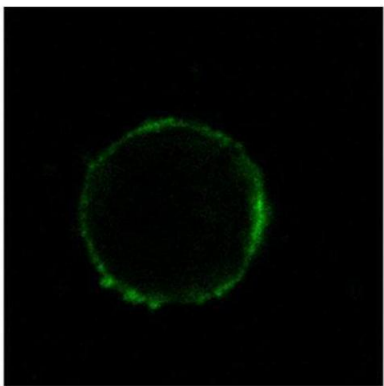
Image 2. Immunoprecipitation of HLA-G from HLA-G1 transfectants (LCL-HLA-G1) by anti-human HLA-G () and protein G. HLA-G was detected by anti-human HLA-G (4H84) and goat anti-mouse HRP in cell lysate (Lane 1) and in the immunoprecipitate (Lane 2).



HLA-G

Immunofluorescence

Image 3. Immunofluorescence staining of HLA-G1 transfectants (LCL-HLA-G1) using anti-human HLA-G () Alexa Fluor $\text{\textcircled{R}}$ 488 Fab-fragment.



Images

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN125708.