Datasheet for ABIN94372

anti-HLAG antibody (FITC)

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Overview

Quantity:	0.1 mg
Target:	HLAG
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This HLAG antibody is conjugated to FITC
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 fluorescein isothiocyanate (FITC) under optimum conditions and unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Target Details

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

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 Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.

Application Details

Restrictions:	For Research Use only

Handling

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. Protect from prolonged exposure to light. Do not freeze.

Publications

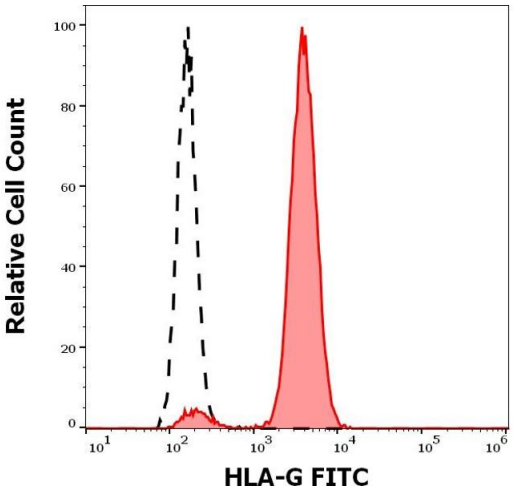
Product cited in:	Zhao, Teklemariam, Hantash: "Reassessment of HLA-G isoform specificity of MEM-G/9 and 4H84 monoclonal antibodies." in: **Tissue antigens**, Vol. 80, Issue 3, pp. 231-8, (2012) (PubMed). Rizzo, Lanzoni, Stignani, Campioni, Alviano, Ricci, Tazzari, Melchiorri, Scalinci, Cuneo, Bonsi, Lanza, Bagnara, Baricordi: "A simple method for identifying bone marrow mesenchymal stromal cells with a high immunosuppressive potential." in: **Cytotherapy**, (2010) (PubMed). López, Alegre, LeMaoult, 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:

Publications

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

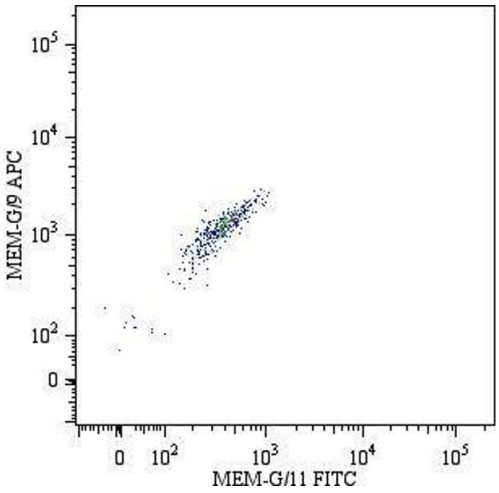
There are more publications referencing this product on: Product page

Images



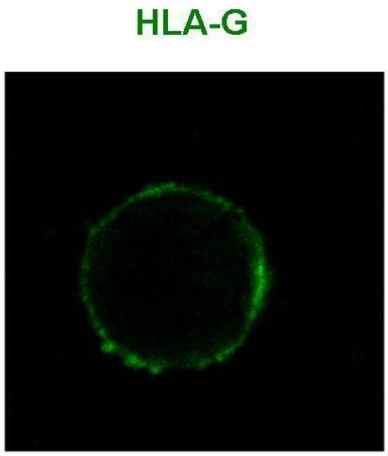
Flow Cytometry

Image 1. Separation of HLA-G transfected LCL cells stained using anti-human HLA-G (MEM-G/9) FITC antibody (concentration in sample 1 µg/mL, red-filled) from HLA-G transfected LCL cells stained using mouse IgG1 isotype control (MOPC-21) FITC antibody (concentration in sample 1 µg/mL, same as HLA-G FITC concentration, black-dashed) in flow cytometry analysis (surface staining) of suspension of HLA-G transfected LCL cells.



Flow Cytometry

Image 2. Double surface staining of HLA-G1 transfectants (viable cells gate) using anti-human HLA-G (MEM-G/9) APC and anti-human HLA-G (MEM-G/11) FITC



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 ABIN94372.