antibodies

Datasheet for ABIN94367 anti-HLAG antibody (Biotin)

3 Images

6 Publications



Overview

Quantity:	0.1 mg
Target:	HLAG
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This HLAG antibody is conjugated to Biotin
Application:	Western Blotting (WB), Immunohistochemistry (Frozen Sections) (IHC (fro)), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Immunogen:	Denatured bacterially expressed recombinant human HLA-G heavy chain.
Clone:	MEM-G-1
lsotype:	lgG1
Specificity:	The antibody MEM-G/1 reacts with an extracellular epitope of denaturated HLA-G heavy chain. HLA-G belongs to the MHC Class I molecules (MHC Class Ib, nonclassical) and it is expressed on the surface of trophoblast cells.
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.

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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:	Optimal working dilution should be determined by the investigator.
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

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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. Do not freeze.
Publications	
Product cited in:	Amiot, Vu, Rauch, LHelgoualch, Chalmel, Gascan, Turlin, Guyader, Samson: "Expression of HLA-
	G by mast cells is associated with hepatitis C virus-induced liver fibrosis." in: Journal of
	hepatology, Vol. 60, Issue 2, pp. 245-52, (2014) (PubMed).
	Shih, Kurman: "p63 expression is useful in the distinction of epithelioid trophoblastic and
	placental site trophoblastic tumors by profiling trophoblastic subpopulations." in: The American
	journal of surgical pathology, Vol. 28, Issue 9, pp. 1177-83, (2004) (PubMed).
	Boyson, Erskine, Whitman, Chiu, Lau, Koopman, Valter, Angelisova, Horejsi, Strominger: "
	Disulfide bond-mediated dimerization of HLA-G on the cell surface." in: Proceedings of the
	National Academy of Sciences of the United States of America, Vol. 99, Issue 25, pp. 16180-5,
	(2002) (PubMed).

Hurks, Valter, Wilson, Hilgert, van den Elsen, Jager: "Uveal melanoma: no expression of HLA-G." in: Investigative ophthalmology & visual science, Vol. 42, Issue 13, pp. 3081-4, (2001) (PubMed).

Fournel, Huc, Aguerre-Girr, Solier, Legros, Praud-Brethenou, Moussa, Chaouat, Berrebi, Bensussan, Lenfant, Le Bouteiller: "Comparative reactivity of different HLA-G monoclonal antibodies to soluble HLA-G molecules." in: Tissue antigens, Vol. 55, Issue 6, pp. 510-8, (2000) (PubMed).

There are more publications referencing this product on: Product page

Images



Western Blotting

Image 1. Western blotting analysis (reducing conditions) of HLA-G1 in HLA-G1 transfectants using the antibody MEM-G/1 biotin.



Immunohistochemistry

Image 2. Immunohistochemistry staining with anti-human HLA-G (MEM-G/1). Fig. 1A - pulmonary disseases (paraffinembedded sections) The antibody MEM-G/1 stains infiltrating macrophages in pulmonary diseases. In the top left corner see the detail of macrophage. Fig. 1B - first-trimester placenta (paraffin-embedded sections) Fig. 1B Immunohistochemistry (first-trimester placenta)

Immunohistochemistry

Image 3. Immunohistochemistry staining with anti-human HLA-G (MEM-G/1). Fig. 1A - pulmonary disseases (paraffinembedded sections) The antibody MEM-G/1 stains infiltrating macrophages in pulmonary diseases. In the top left corner see the detail of macrophage.