

**HLA-G Antibody**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AW5220****Specification**

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**HLA-G Antibody - Product Information**

Application	<b>WB,E</b>
Primary Accession	<a href="#">P17693</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Calculated MW	<b>H=38 KDa</b>
Isotype	<b>IgG1</b>
Antigen Source	<b>HUMAN</b>

**HLA-G Antibody - Additional Information****Gene ID** 3135**Antigen Region**  
1-318**Other Names**

HLA-G;HLA-6.0; HLAG; HLA class I histocompatibility antigen, alpha chain G; HLA class I histocompatibility antigen, alpha chain G; HLA G antigen; HLA class I histocompatibility antigen, alpha chain G; MHC class I antigen G

**Dilution**

WB~~1:1000

**Target/Specificity**

Purified His-tagged HLA-G protein was used to produced this monoclonal antibody.

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

HLA-G Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**HLA-G Antibody - Protein Information****Name** HLA-G {ECO:0000303|PubMed:1570318, ECO:0000312|HGNC:HGNC:4964}

## Function

[Isoform 1]: Non-classical major histocompatibility class Ib molecule involved in immune regulatory processes at the maternal-fetal interface (PubMed:<a href="http://www.uniprot.org/citations/19304799" target="\_blank">19304799</a>, PubMed:<a href="http://www.uniprot.org/citations/23184984" target="\_blank">23184984</a>, PubMed:<a href="http://www.uniprot.org/citations/29262349" target="\_blank">29262349</a>). In complex with B2M/beta-2 microglobulin binds a limited repertoire of nonamer self-peptides derived from intracellular proteins including histones and ribosomal proteins (PubMed:<a href="http://www.uniprot.org/citations/7584149" target="\_blank">7584149</a>, PubMed:<a href="http://www.uniprot.org/citations/8805247" target="\_blank">8805247</a>). Peptide-bound HLA-G-B2M complex acts as a ligand for inhibitory/activating KIR2DL4, LILRB1 and LILRB2 receptors on uterine immune cells to promote fetal development while maintaining maternal- fetal tolerance (PubMed:<a href="http://www.uniprot.org/citations/16366734" target="\_blank">16366734</a>, PubMed:<a href="http://www.uniprot.org/citations/19304799" target="\_blank">19304799</a>, PubMed:<a href="http://www.uniprot.org/citations/20448110" target="\_blank">20448110</a>, PubMed:<a href="http://www.uniprot.org/citations/23184984" target="\_blank">23184984</a>, PubMed:<a href="http://www.uniprot.org/citations/27859042" target="\_blank">27859042</a>, PubMed:<a href="http://www.uniprot.org/citations/29262349" target="\_blank">29262349</a>). Upon interaction with KIR2DL4 and LILRB1 receptors on decidual NK cells, it triggers NK cell senescence-associated secretory phenotype as a molecular switch to promote vascular remodeling and fetal growth in early pregnancy (PubMed:<a href="http://www.uniprot.org/citations/16366734" target="\_blank">16366734</a>, PubMed:<a href="http://www.uniprot.org/citations/19304799" target="\_blank">19304799</a>, PubMed:<a href="http://www.uniprot.org/citations/23184984" target="\_blank">23184984</a>, PubMed:<a href="http://www.uniprot.org/citations/29262349" target="\_blank">29262349</a>). Through interaction with KIR2DL4 receptor on decidual macrophages induces pro-inflammatory cytokine production mainly associated with tissue remodeling (PubMed:<a href="http://www.uniprot.org/citations/19304799" target="\_blank">19304799</a>). Through interaction with LILRB2 receptor triggers differentiation of type 1 regulatory T cells and myeloid-derived suppressor cells, both of which actively maintain maternal-fetal tolerance (PubMed:<a href="http://www.uniprot.org/citations/20448110" target="\_blank">20448110</a>, PubMed:<a href="http://www.uniprot.org/citations/27859042" target="\_blank">27859042</a>). May play a role in balancing tolerance and antiviral-immunity at maternal-fetal interface by keeping in check the effector functions of NK, CD8+ T cells and B cells (PubMed:<a href="http://www.uniprot.org/citations/10190900" target="\_blank">10190900</a>, PubMed:<a href="http://www.uniprot.org/citations/11290782" target="\_blank">11290782</a>, PubMed:<a href="http://www.uniprot.org/citations/24453251" target="\_blank">24453251</a>). Reprograms B cells toward an immune suppressive phenotype via LILRB1 (PubMed:<a href="http://www.uniprot.org/citations/24453251" target="\_blank">24453251</a>). May induce immune activation/suppression via intercellular membrane transfer (troglucytosis), likely enabling interaction with KIR2DL4, which resides mostly in endosomes (PubMed:<a href="http://www.uniprot.org/citations/20179272" target="\_blank">20179272</a>, PubMed:<a href="http://www.uniprot.org/citations/26460007" target="\_blank">26460007</a>). Through interaction with the inhibitory receptor CD160 on endothelial cells may control angiogenesis in immune privileged sites (PubMed:<a href="http://www.uniprot.org/citations/16809620" target="\_blank">16809620</a>).

## Cellular Location

[Isoform 1]: Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane. Early endosome membrane [Isoform 2]: Cell membrane; Single-pass type I membrane protein [Isoform 4]: Cell membrane; Single-pass type I membrane protein [Isoform 6]: Secreted Cell projection, filopodium membrane. Note=HLA-G troglucytosis from extravillous trophoblast's filopodia occurs in the majority of decidual NK cells.

## Tissue Location

Expressed in adult eye (PubMed:1570318). Expressed in immune cell subsets including monocytes, myeloid and plasmacytoid dendritic cells and regulatory T cells (Tr1)(at protein level)

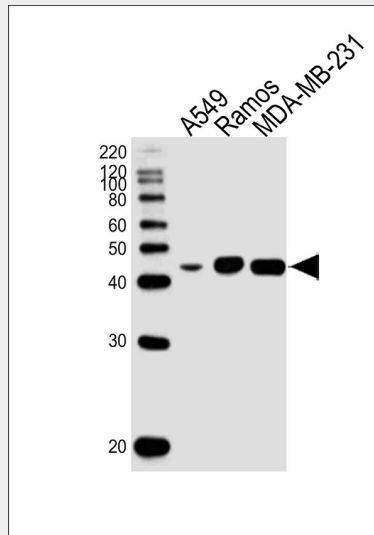
(PubMed:20448110). Secreted by follicular dendritic cell and follicular helper T cells  
(PubMed:24453251) [Isoform 7]: Expressed in placenta, amniotic membrane, skin, cord blood and peripheral blood mononuclear cells

## HLA-G Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## HLA-G Antibody - Images



Western blot analysis of lysates from A549, Ramos, MDA-MB-231 cell line (from left to right), using HLA-G Antibody (Cat. #AW5220). AW5220 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody.

## HLA-G Antibody - Background

Involved in the presentation of foreign antigens to the immune system. Plays a role in maternal tolerance of the fetus by mediating protection from the deleterious effects of natural killer cells, cytotoxic T-lymphocytes, macrophages and mononuclear cells.

## HLA-G Antibody - References

- Shukla H., et al. *Nucleic Acids Res.* 18:2189-2189(1990).  
Geraghty D.E., et al. *Proc. Natl. Acad. Sci. U.S.A.* 84:9145-9149(1987).  
Ishitani A., et al. Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases.  
Hampe A., et al. *DNA Seq.* 10:263-299(1999).  
Shiina S., et al. Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.