

HLA-G Antibody
Mouse Monoclonal Antibody (Mab)
Catalog # AM2208b

Specification

HLA-G Antibody - Product Information

Application	WB,E
Primary Accession	P17693
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	38224

HLA-G Antibody - Additional Information

Gene ID 3135

Other Names

HLA class I histocompatibility antigen, alpha chain G, HLA G antigen, MHC class I antigen G, HLA-G, HLA-60, HLAG

Target/Specificity

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

Dilution

WB~~1:1000

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:[19304799](#), PubMed:[23184984](#), PubMed:[29262349](#)). 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:[7584149](#), PubMed:[8805247](#)). 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:[16366734](#), PubMed:[19304799](#), PubMed:[20448110](#), PubMed:[23184984](#), PubMed:[27859042](#), PubMed:[29262349](#)). 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:[16366734](#), PubMed:[19304799](#), PubMed:[23184984](#), PubMed:[29262349](#)). Through interaction with KIR2DL4 receptor on decidual macrophages induces pro-inflammatory cytokine production mainly associated with tissue remodeling (PubMed:[19304799](#)). 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:[20448110](#), PubMed:[27859042](#)). 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:[10190900](#), PubMed:[11290782](#), PubMed:[24453251](#)). Reprograms B cells toward an immune suppressive phenotype via LILRB1 (PubMed:[24453251](#)). May induce immune activation/suppression via intercellular membrane transfer (troglucytosis), likely enabling interaction with KIR2DL4, which resides mostly in endosomes (PubMed:[20179272](#), PubMed:[26460007](#)). Through interaction with the inhibitory receptor CD160 on endothelial cells may control angiogenesis in immune privileged sites (PubMed:[16809620](#)).

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

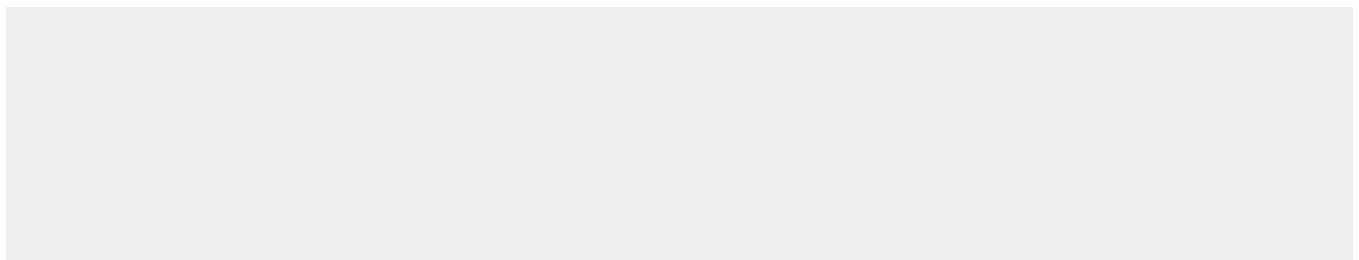
Expressed in adult eye (PubMed:1570318). Expressed in immune cell subsets including monocytes, myeloid and plasmacytoid dendritic cells and regulatory T cells (Tr1)(at protein level) (PubMed:20448110). Secreted by follicular dendritic cell and follicular helper T cells (PubMed:24453251) [Isoform 7]: Expressed in placenta, amniotic membrane, skin, cord blood and peripheral blood mononuclear cells

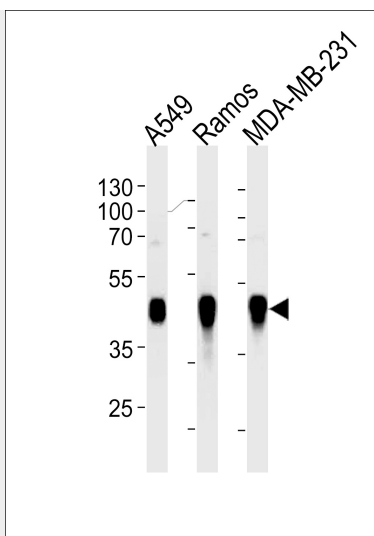
HLA-G Antibody - Protocols

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





HLA-G Antibody (Cat. #AM2208b) western blot analysis in A549, Ramos, MDA-MB-231 cell line lysates (35 µg/lane). This demonstrates the HLA-G antibody detected the HLA-G protein (arrow).

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.