

HLA-G Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51989**Specification**

HLA-G Antibody - Product Information

Application	WB, E
Primary Accession	P17693
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42 KDa

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

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human HLA-G. The exact sequence is proprietary.

Dilution

WB~~1:1000

E~~N/A

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

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:7584149).

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