

# HLA-G Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51989

## Product Information

Application	WB
Primary Accession	<a href="#">P17693</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	38224

## 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
Dilution	WB~~1:1000
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

## 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="#">19304799</a> , PubMed: <a href="#">23184984</a> , PubMed: <a href="#">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="#">7584149</a> , PubMed: <a href="#">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="#">16366734</a> , PubMed: <a href="#">19304799</a> , PubMed: <a href="#">20448110</a> , PubMed: <a href="#">23184984</a> , PubMed: <a href="#">27859042</a> , PubMed: <a href="#">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="#">16366734</a> , PubMed: <a href="#">19304799</a> , PubMed: <a href="#">23184984</a> , PubMed: <a href="#">29262349</a> ). Through interaction with KIR2DL4 receptor on decidual macrophages induces pro-inflammatory cytokine production mainly associated with tissue remodeling (PubMed: <a href="#">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:[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 (troglodytosis), 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 troglodytosis 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

## Background

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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.

## References

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- 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).  
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