

HLA-G Antibody

Mouse Monoclonal Antibody (Mab)

Catalog # AM2208b

Product Information

Application	WB, E
Primary Accession	P17693
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	800CT6.4.2
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
Target/Specificity	Purified His-tagged HLA-G protein was used to produced this monoclonal antibody.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
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.

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 (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

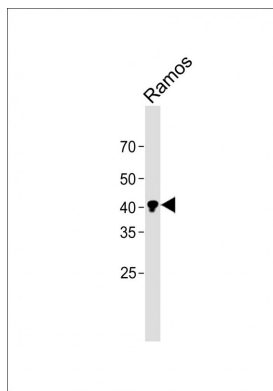
Involved in the presentation of foreign antigens to the immune system. Plays a role in maternal tolerance of the fetus by mediating protection from the deleterious effects of natural killer cells, cytotoxic T-lymphocytes, macrophages and mononuclear cells.

References

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.

Images

All lanes: Anti-HLA-G Antibody at 1:1000 dilution + Ramos



whole cell lysate Lysates/proteins at 20 μ g per lane.
Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase
conjugated (ASP1613) at 1/8000 dilution. Observed band
size: 43 KDa Blocking/Dilution buffer: 5% NFDN/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.