abcam

ab52455

Anti-HLA G antibody [4H84]

Anti-HLA G antibody [4H84] (ab52455) is a mouse monoclonal antibody detecting HLA G in **Western Blot, Flow Cytometry, IHC-P**. Suitable for **Human**.

- Over 30 publications
- Trusted since 2007

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human HLA-G aa 50-100. The exact immunogen used to generate this antibody is proprietary information. Database link P17693
Clone number	4H84
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from hybridoma culture supernatant. Purity >95% by SDS-PAGE.

Reactivity data

WB

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

IHC-P

Expected

Species	Human
Dilution info	10 µg/mL
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information HLA-G

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 (trogocytosis), 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). Isoform 2. Likely does not bind B2M and presents peptides. Negatively regulates NK cell- and CD8+ T cell-mediated cytotoxicity (PubMed:11290782). Isoform 3. Likely does not bind B2M and presents peptides. Negatively regulates NK cell- and CD8+ T cell-mediated cytotoxicity (PubMed:11290782). Isoform 4. Likely does not bind B2M and presents peptides. Negatively regulates NK cell- and CD8+ T cell-mediated cytotoxicity (PubMed:11290782). Isoform 5. 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: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). Reprograms B cells toward an immune suppressive phenotype via LILRB1 (PubMed:24453251). Isoform 6. Likely does not bind B2M and presents peptides. Isoform 7. Likely does not bind B2M and presents peptides.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot

Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-HLA G antibody [4H84] (ab52455) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P) in Human samples.

What is the molecular weight of HLA G?
Anti-HLA G [4H84] (ab52455) specifically detects a band for HLA G (UniProt: P17693) at a molecular weight of 38kDa.

Trusted by the scientific community
Anti-HLA G [4H84] (ab52455) was first used in a scientific publication in 2007 and has been cited over 30 times in peer-reviewed journals.

Reviewed by scientists
Anti-HLA G [4H84] (ab52455) has over 5 independent reviews from customers.

Other related products
We have a range of other formats of antibody clone [4H84] also available for your convenience: ab52455, Biotin - ab52456

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

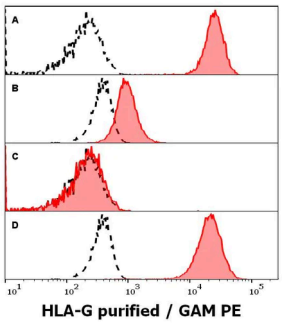
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - Anti-HLA G antibody [4H84] (ab52455)

Analysis of the antibody staining was performed on HLA-G1 transfected LCL 721.221 cells treated or untreated by short incubation with citrate-phosphate (pH 3) buffer (Polakova K. et al. Molecular immunology 1993; 1223-30). Mild acid treatment resulted in dissociation of µ2-microglobulin from native HLA-G conformation. Anti-Hu HLA-G (clone 4H84) purified antibody (concentration in sample 5 µg/ml, GAM APC, red-filled histogram) binds specifically to HLA-G free heavy chain (panel A), but not to the native HLA-G complex (panel B). In the control experiment it was confirmed that Anti-Hu HLA-G (clone 87G) purified antibody (concentration in sample 5 µg/ml, GAM APC, red-filled histogram) does not bind to HLA-G free heavy chain after mild acid treatment (panel C), whereas it recognizes well native µ2-microglobulin HLA-G conformation (panel D). Level of non-specific binding was assessed using Mouse IgG1 isotype control purified antibody (MOPC-21) under same conditions (concentration in sample 5 µg/ml, GAM APC, black-dashed histogram).

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