

HLA-G monoclonal antibody, clone 87G

Catalog # MAB11223 Size 100 ug

Applications

Functional Study

Analysis of cytolytical activity of human polyclonal NK cells on target melanoma cells. Blocking of HLA-G1 on transfectants with anti-human HLA-G (87G) restored specific lysis.

Target cells : M8 cell line transfected with empty vector (column 1) and with HLA-G1 cDNA (columns 2-6).

Blocking antibodies :

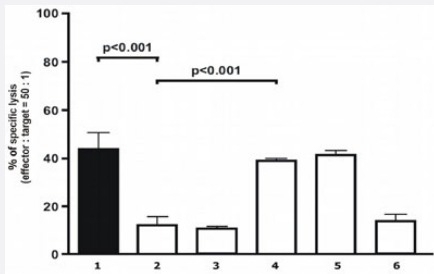
Column 1-2 : none.

Column 3 : Isotype mouse IgG2a control.

Column 4 : HLA-G monoclonal antibody, clone 87G (Cat # MAB11223).

Column 5 : HLA-G (Fab) monoclonal antibody, clone 87G.

Column 6 : HLA-G monoclonal antibody, clone MEM-G/9 (Cat # MAB3855).



Specification

Product Description	Mouse monoclonal antibody raised against HLA-G and B2M.
Immunogen	HLA-B27 transgenic mice were immunized with H-2 identical murine cells transfected with and expressing genes encoding HLA-G and human beta2-microglobulin.
Host	Mouse
Reactivity	Human
Specificity	This antibody recognizes both membrane-bound and soluble forms of HLA-G (HLA-G1 and HLA-G5). HLA-G belongs to the MHC Class I molecules (MHC Class Ib; nonclassical) and it is expressed on the surface of trophoblast cells. This antibody blocks interaction of HLA-G with inhibitory receptors.
Form	Liquid
Purification	Protein-A affinity chromatography

Purity	> 95% by SDS-PAGE
Endotoxin Level	< 0.01 EU/ug
Isotype	IgG2a
Recommend Usage	ELISA (1 ug/mL) Flow Cytometry (2 ug/ml) Immunohistochemistry (Frozen sections) (10 ug/mL) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, pH 7.4
Storage Instruction	Store at 4°C. Do not freeze. Aliquot to avoid repeated freezing and thawing.

Applications

- Immunohistochemistry (Frozen sections)
- Enzyme-linked Immunoabsorbent Assay
- Functional Study

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- Flow Cytometry

Gene Info — HLA-G

Entrez GeneID	3135
Gene Name	HLA-G
Gene Alias	MHC-G
Gene Description	major histocompatibility complex, class I, G

Omim ID [142871 600807](#)

Gene Ontology [Hyperlink](#)

Gene Summary

HLA-G belongs to the HLA class I heavy chain paralogues. This class I molecule is a heterodimer consisting of a heavy chain and a light chain (beta-2 microglobulin). The heavy chain is anchored in the membrane. HLA-G is expressed on fetal derived placental cells. The heavy chain is approximately 45 kDa and its gene contains 8 exons. Exon one encodes the leader peptide, exons 2 and 3 encode the alpha1 and alpha2 domain, which both bind the peptide, exon 4 encodes the alpha3 domain, exon 5 encodes the transmembrane region, and exon 6 encodes the cytoplasmic tail. [provided by RefSeq]

Other Designations

HLA class I molecule|HLA-G histocompatibility antigen, class I, G|MHC class I antigen|OTTHUMP00000039485|b2 microglobulin

Publication Reference

- [IDO-1 impairs antitumor immunity of natural killer cells in triple-negative breast cancer via up-regulation of HLA-G.](#)

Rui Jing, Shukun Bai, Peipei Zhang, Hao Ren, Lintao Jia, Weimiao Li, Guoxu Zheng.

Breast Cancer 2023 Nov; [Epub]:0.

Application: Blocking, Human, Triple-negative breast cancer (TNBC) cells

- [Interaction between HLA-G and NK cell receptor KIR2DL4 orchestrates HER2-positive breast cancer resistance to trastuzumab.](#)

Guoxu Zheng, Zhangyan Guo, Weimiao Li, Wenjin Xi, Baile Zuo, Rui Zhang, Weihong Wen, An-Gang Yang, Lintao Jia.

Signal Transduction and Targeted Therapy 2021 Jun; 6(1):236.

Application: Blocking, Flow Cyt, Func, Human, BT-474 cells, Human nature killer cells, SK-BR-3 cells

Pathway

- [Allograft rejection](#)
- [Antigen processing and presentation](#)
- [Autoimmune thyroid disease](#)
- [Cell adhesion molecules \(CAMs\)](#)
- [Endocytosis](#)
- [Graft-versus-host disease](#)
- [Natural killer cell mediated cytotoxicity](#)

- [Type I diabetes mellitus](#)

Disease

- [Abortion](#)
- [Anemia](#)
- [Arthritis](#)
- [Asthma](#)
- [Autoimmune Diseases](#)
- [Behcet Syndrome](#)
- [Birth Weight](#)
- [Bronchial Hyperreactivity](#)
- [Carcinoma](#)
- [Cardiomyopathy](#)
- [Cardiovascular Diseases](#)
- [Cervical Intraepithelial Neoplasia](#)
- [Cholestasis](#)
- [Chorioamnionitis](#)
- [Colitis](#)
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- [Hepatitis C](#)
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- [Infection](#)
- [Infertility](#)
- [Lupus Erythematosus](#)
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- [Multiple Sclerosis](#)
- [Obstetric Labor](#)
- [Papillomavirus Infections](#)
- [Photosensitivity Disorders](#)
- [Pneumonia](#)
- [Pre-Eclampsia](#)
- [Pregnancy Complications](#)
- [Premature Birth](#)
- [Prenatal Exposure Delayed Effects](#)
- [Psoriasis](#)
- [Purpura](#)

- [Sarcoidosis](#)
- [Thalassemia](#)
- [Tobacco Use Disorder](#)
- [Urinary Bladder Neoplasms](#)
- [Uterine Cervical Neoplasms](#)