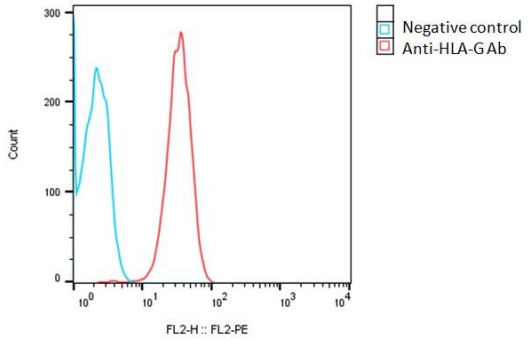
Human HLA-G-CHO-K1 Stable Cell Line
Catalog Number: C3058

SPECIFICATIONS

Catalog Number	C3058
Cell Line Name	Human HLA-G-CHO-K1 stable cell line
Accession Number	NM_001363567.2
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells ($2x10^6$ per vial)
Culture Medium	DMEM with 10% FBS, 10 μg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of human HLA-G expression on human HLA-G-CHO-K1 stable cells using a monoclonal antibody specific for human HLA-G (BioLegend, Cat #335906)



BACKGROUND

Human leukocyte antigen-G (HLA-G) is a member of the major histocompatibility complex (MHC) class I family. HLA-G exhibits restricted tissue distribution and immune privilege, making it a crucial player in maternal-fetal tolerance, transplantation, and immune evasion in various pathological conditions. HLA-G exerts its immunomodulatory effects through interactions with inhibitory receptors on immune cells, including leukocyte immunoglobulin-like receptor subfamily B (LILRB) and killer cell immunoglobulin-like receptor (KIR) family members. HLA-G engages these receptors and inhibits the activation and cytotoxicity of T cells, natural killer (NK) cells, and antigen-presenting cells (APCs), thus dampening immune responses and promoting tolerance. HLA-G expression is tightly regulated and predominantly observed in immune-privileged sites such as the placenta, cornea, thymus, and pancreatic islets. Aberrant expression of HLA-G has been reported in numerous malignancies, including breast, ovarian, lung, and melanoma cancers and is often associated with immune escape, tumor progression, and poor clinical outcomes. HLA-G expression in cancer is linked to resistance against cytotoxic T lymphocytes (CTLs) and NK cells, facilitating tumor immune evasion. Given its involvement in immune evasion and tumor progression, HLA-G represents an attractive therapeutic target for cancer immunotherapy. Monoclonal antibodies targeting HLA-G or its receptors, as well as immunomodulatory therapies to promote anti-tumor immune responses, hold promise in enhancing the efficacy of cancer treatment.

References

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