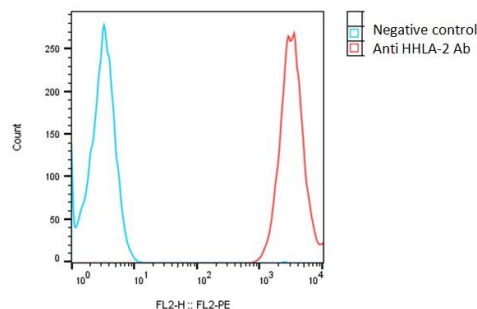


SPECIFICATIONS

Catalog Number	C3047
Cell Line Name	Human HHLA-2-CHO-K1 stable cell line
Accession Number	NM_001282556.2
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells (2x10 ⁶ per vial)
Culture Medium	DMEM with 10% FBS, 4 µg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of human HHLA-2 expression on human HHLA-2-CHO-K1 stable cells using a monoclonal antibody specific for human HHLA-2 (Accurus, Cat. #A1021), followed by staining with PE-anti human antibody.


BACKGROUND

HERV-H LTR-Associating Protein 2 (HHLA-2), also known as B7y, B7H7, and B7-H5, is a transmembrane protein of the B7 family of immune checkpoint molecules that helps to modulate T cell activity and regulate the immune response in various physiological and pathological conditions. It binds to the receptor TMIGD2 (Transmembrane and Immunoglobulin Domain Containing 2), and can lead to both co-stimulatory and inhibitory signals, depending on the context and cellular environment. HHLA-2 is found to be expressed in various normal tissues, including the placenta, kidney, intestine, gall bladder and breast and on the surface of monocytes and B cells. Its expression pattern suggests potential roles in tissue homeostasis and immune regulation. HHLA-2 has been found to be overexpressed in several cancers. This upregulation is associated with tumor progression and immune evasion mechanisms employed by cancer cells. HHLA-2 overexpression has been linked to the inhibition of antitumor immune responses by suppressing T cell activation and promoting immune tolerance within the tumor microenvironment. The identification of HHLA-2 as a potential therapeutic target has led to investigations into developing HHLA-2-targeted immunotherapies. Strategies such as the blockade or agonistic stimulation of HHLA-2/TMIGD2 interactions are being explored to enhance anti-tumor immune responses, highlighting the potential of HHLA-2 as a target for cancer immunotherapy.

References

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Li Y, Lv C, Yu Y, Wu B, Zhang Y, Lang Q, Liang Z, Zhong C, Shi Y, Han S, Xu F, Tian Y. KIR3DL3-HHLA2 and TMIGD2-HHLA2 pathways: The dual role of HHLA2 in immune responses and its potential therapeutic approach for cancer immunotherapy. *J Adv Res*. 47:137-150. 2023

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