

DESCRIPTION

Cell Line Name	Human TIGIT-CHO-K1 stable cell line (HuTIGIT-CHO-K1)
Catalog Number	C3020
Gene Sequences	NM_173799.4
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells (2x10 ⁶ per vial)
Culture Medium	DMEM with 10% FBS, 4μg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

BACKGROUND

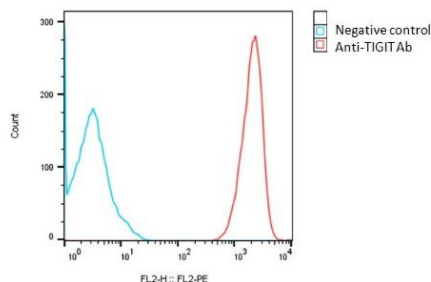
Human T-cell immunoreceptor with Ig and ITIM domains (TIGIT) is a cell surface protein and plays a role as a crucial inhibitory immune checkpoint. TIGIT is a member of the PVR-like protein family in the immunoglobulin superfamily and is expressed on various immune cells, including CD4⁺ and CD8⁺ T cells, regulatory T cells, natural killer (NK) cells, and dendritic cells (DCs). TIGIT is expressed in various tissues, including lymphoid tissues, spleen, thymus, lung, and liver. In cancers, TIGIT expression has been observed in various solid tumors, including lung cancer, melanoma, ovarian cancer, and breast cancer. In these tumors, TIGIT expression has been associated with immune evasion and resistance to immune checkpoint blockade therapy. TIGIT binds to CD155 (PVR, Nectin-5), CD112 (PVRL2, Nectin-2), and CD113, but with much higher affinity to CD155, which is expressed on dendritic cells (DCs), T cells, B cells, macrophages, endothelial cells, and tumor cells. The binding of TIGIT to its ligands results in the inhibition of T-cell activation, leading to immune suppression. Moreover, TIGIT also binds to CD226 (DNAM-1), an activating receptor that promotes T-cell activation. Due to its role in immune regulation and its expression in cancers, TIGIT has emerged as a promising therapeutic target for cancer immunotherapy.

THAWING AND CULTURING

- Remove the cell vial from liquid nitrogen tank and thaw cells quickly in a 37°C water bath
- Transfer the cells to a 15 ml centrifuge tube and slowly add 5 ml of pre-warmed complete growth medium
- Centrifuge the cells at 200x g for 5 min
- Remove the supernatant
- Resuspend cell pellet with 7 ml of complete growth medium and transfer cells to a T25 flask
- Incubate cells in an incubator with 5% CO₂ at 37°C
- Split the cells twice a week or as needed.

DATA

Detection of human TIGIT expression on human TIGIT-CHO-K1 stable cells using a monoclonal antibody specific for human TIGIT (Cat #A1014)



REFERENCES

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- Harjunpää H, Guillerey C. *Clin Exp Immunol*. **200**:108-119. 2020.
- Ge Z, Peppelenbosch MP, Sprengers D, Kwekkeboom J. *Front Immunol*.**12**:699895. 2021.

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