PD1/TIGIT Dual Effector Reporter Cell

CBP74126

Contents

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I. Background

The binding of Programmed Cell Death Protein 1 (PD-1), a receptor expressed on activated T cells, to its ligands, PD-L1 and PD-L2, negatively regulates immune responses. The PD-1 ligands are found on most cancers, and PD-1:PD-L1/2 interaction inhibits T cell activity and allows cancer cells to escape immune surveillance. The PD-1:PD-L1/2 pathway is also involved in regulating autoimmune responses, making these proteins promising therapeutic targets for a number of cancers, as well as multiple sclerosis, arthritis, lupus, and type I diabetes.

TIGIT is a co-inhibitory receptor that is highly expressed in Natural Killer (NK) cells, activated CD4+, CD8+ and regulatory T cells. Interaction with the poliovirus receptor (PVR; CD155) on antigen presenting cells, such as dendritic cells, recruits Src homology (SH) domain-containing protein tyrosine phosphatase SHP1 and SHP2 or the inositol phosphatase SHIP1 and SHIP2 to the TIGIT ITIM domain. This increases IL-10 release and suppresses NF-kB and NFAT T cell receptor (TCR) signaling, which blocks T cell proliferation and cytokine production. It serves as a competitive inhibitor of CD226, a co-stimulatory receptor for CD155. TIGIT targeting antibodies that block this T cell-intrinsic inhibitory effects have shown enhanced anti-tumor and anti-viral functions in preclinical studies.

II. Introduction

Expressed gene: PD-1

Stability: 32 passages (in-house test, that not means the cell line will be

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instable beyond the passages we tested.)

Freeze Medium: 90% FBS+10% DMSO

Culture Medium: F12K+10%FBS+600ug/ml hygromycin+2ug/ml puromycin+5ug/ml blasticidin

Mycoplasma Testing: Negative

Storage: Liquid nitrogen

Application(s): Functional(Report Gene) Assay

III. Representative Data

	Population Name	Mean , FL1-A
	PD1 / TIGIT Dual Effector Reporter cell+anti-PD1	1.15E4
	Control Cell+anti-PD1	145

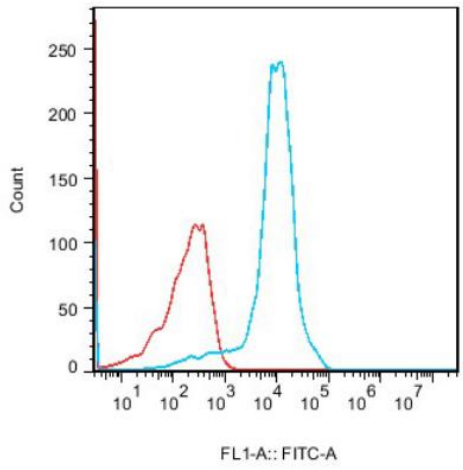

Figure 1. Recombinant PD1/TIGIT Dual Effector Reporter Cell constitutively expressing PD1.

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	Population Name	Mean , FL2-A
	PD1 / TIGIT Dual Effector Reporter cell+anti-TIGIT	2.54E6
	Control Cell+anti-TIGIT	4525

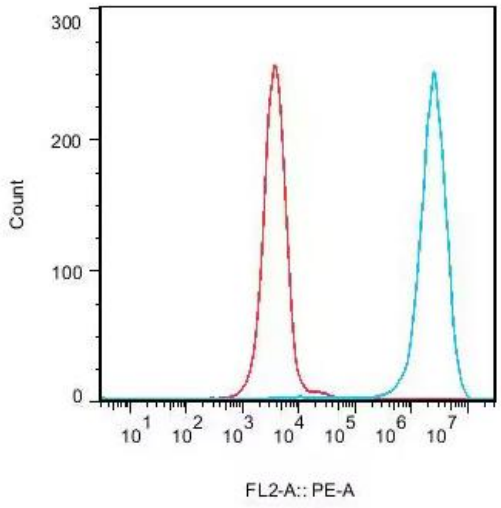

Figure 2. Recombinant PD1/TIGIT Dual Effector Reporter Cell constitutively expressing TIGIT.

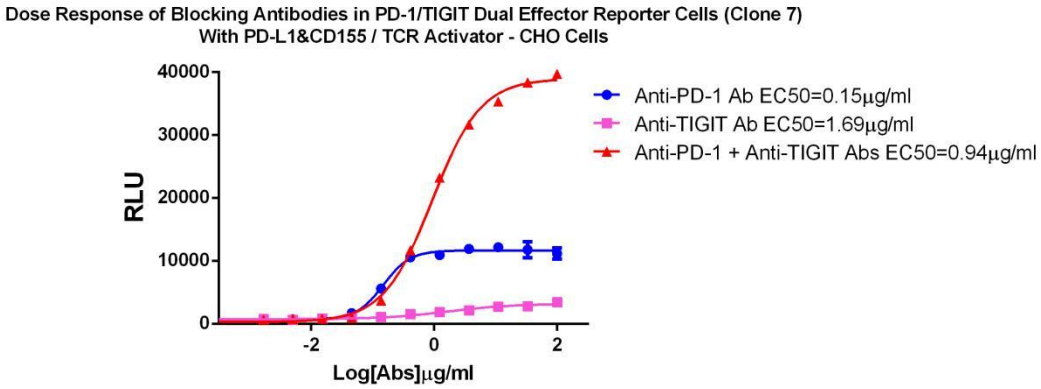

Figure 3. Dose Response of Blocking Antibodies in PD-1/TIGIT Dual Effector Reporter Cells (Clone 7) With PD-L1&CD155/ TCR Activator - CHO Cells.

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