Genomeditech (Shanghai) Co.,Ltd.
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Product Sheet

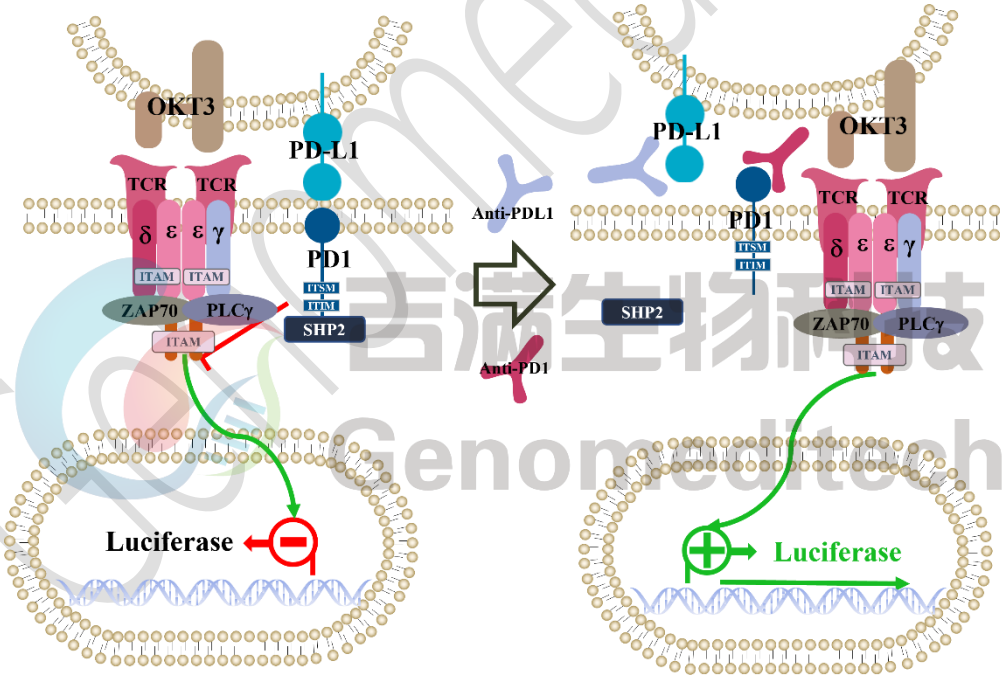
Mouse_PD-1 Reporter Jurkat Cell Line

Catalog number: GM-C25661

Version 3.3.1.250228

PD-1 is an immunosuppressive receptor on activated T and B cells, essential for regulating immune responses to tumor antibodies and self-antigens. Its interaction with ligands PD-L1 or PD-L2 inhibits TCR signaling, affecting cell proliferation, transcriptional activation, and cytokine production. Therapeutic antibodies and Fc fusion proteins blocking this interaction have shown promise in cancer clinical trials.

Mouse_PD-1 Reporter Jurkat Cell Line is a stable clonal Jurkat cell line constructed using lentiviral technology, constitutive expression of the mouse PD-1 gene, along with signal-dependent expression of a luciferase reporter gene. The Mouse PDL1 aAPC CHO-K1 Cell Line (Cat. GM-C25791) is another stable clonal cell line that expresses mouse PD-L1 and a cell surface protein that activates homologous TCR in an antigen-independent manner. Co-culturing these cells inhibits TCR signaling and luciferase expression due to the PD-1/PD-L1 interaction. Adding antibodies that block this interaction relieves the inhibition, allowing TCR signaling and luciferase expression to resume. This setup can assess the efficacy and stability of antibodies and biologics that block the PD-1/PD-L1 interaction.



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Specifications

Quantity	5E6 Cells per vial,1 mL
Product Format	1 vial of frozen cells
Shipping	Shipped on dry ice
Storage Conditions	Liquid nitrogen immediately upon receipt
Recovery Medium	RPMI 1640+10% FBS+1% P.S
Growth medium	RPMI 1640+10% FBS+1% P.S+3.5 μg/mL Blasticidin+0.75 μg/mL Puromycin
Note	None
Freezing Medium	90% FBS+10% DMSO
Growth properties	Suspension
Growth Conditions	37°C, 5% CO_2
Mycoplasma Testing	The cell line has been screened to confirm the absence of Mycoplasma species.
Safety considerations	Biosafety Level 2
Note	It is recommended to expand the cell culture and store a minimum of 10 vials at an early passage for potential future use.

Materials

Reagent	Manufacturer/Catalogue No.
RPMI 1640	VivaCell/C3010-0500
Fetal Bovine Serum	Cegrogen biotech/A0500-3010
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/GM-040404
Puromycin	Genomeditech/GM-040401
Mouse PDL1 aAPC CHO-K1 Cell Line	Genomeditech/GM-C25791
Anti-H_CD274(PDL1) hIgG1 Antibody(Atezolizumab)	Genomeditech/GM-31740AB
Anti-mouse_PD1 mIgG1 Antibody(RMP1-14)	Genomeditech/GM-28206AB
GMOne-Step Luciferase Reporter Gene Assay Kit	Genomeditech/GM-040503

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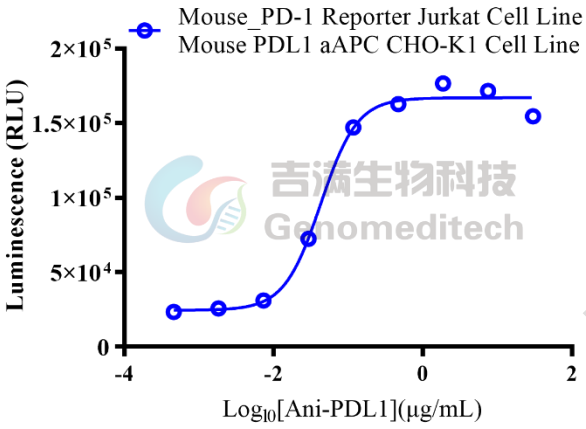
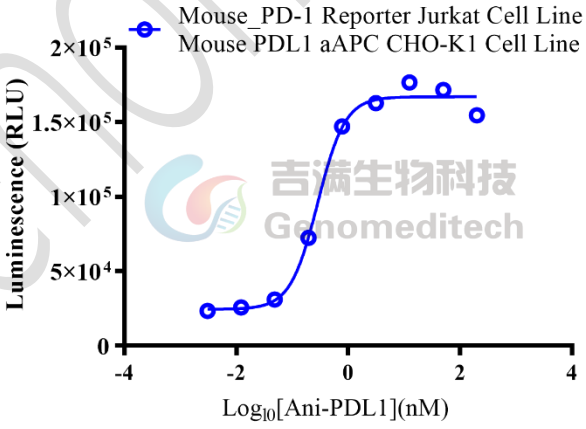
Figures



	Mouse_PD-1 Reporter Jurkat
EC50	0.04280

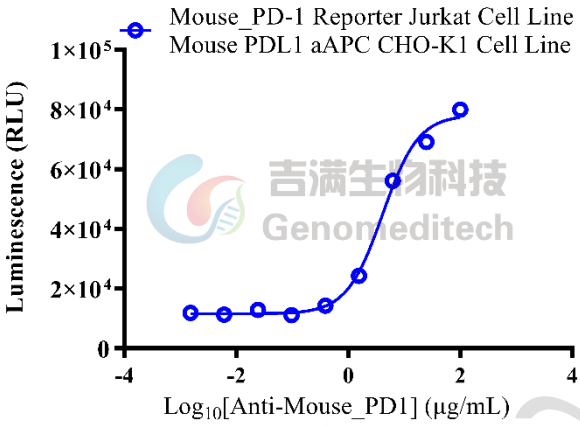
Figure 1 | Response to Anti-H_CD274(PDL1) hIgG1 Antibody (Atezolizumab). Serial dilutions of the Anti-H_CD274(PDL1) hIgG1 Antibody (Atezolizumab) (Cat. GM-31740AB) was incubated with 2E4 cells/well of the Mouse PDL1 aAPC CHO-K1 Cell Line (Cat. GM-C25791) in a 96-well plate for 1 hour. Subsequently, Mouse_PD-1 Reporter Jurkat Cell Line (Cat. GM-C25661) with a concentration of 1E5 cells/well was added, and the co-culture proceeded for an additional 6 hours in assay buffer (RPMI 1640 + 1% FBS + 1% P.S). Firefly luciferase activity is then measured using the GMOne-Step Luciferase Reporter Gene Assay Kit (Genomeditech/GM-040503). The results indicated a maximum blocking fold of approximately [7.1]. Data are shown by drug mass concentration.



	Mouse_PD-1 Reporter Jurkat
EC50	0.2854

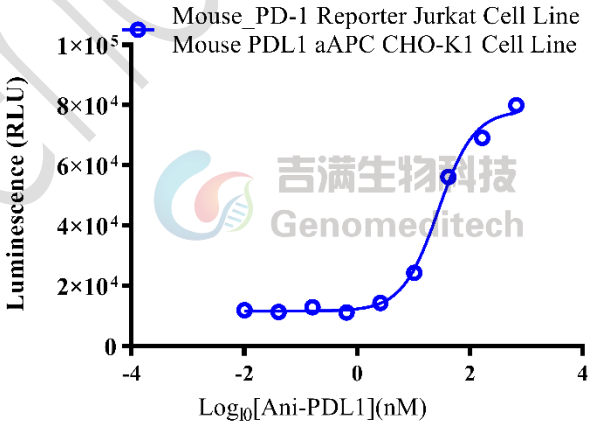
Figure 2 | Response to Anti-H_CD274(PDL1) hIgG1 Antibody (Atezolizumab). Serial dilutions of the Anti-H_CD274(PDL1) hIgG1 Antibody (Atezolizumab) (Cat. GM-31740AB) was incubated with 2E4 cells/well of the Mouse PDL1 aAPC CHO-K1 Cell Line (Cat. GM-C25791) in a 96-well plate for 1 hour. Subsequently, Mouse_PD-1 Reporter Jurkat Cell Line (Cat. GM-C25661) with a concentration of 1E5 cells/well was added, and the co-culture proceeded for an additional 6 hours in assay buffer (RPMI 1640 + 1% FBS + 1% P.S). Firefly luciferase activity is

then measured using the GMOne-Step Luciferase Reporter Gene Assay Kit (Genomeditech/GM-040503). The results indicated a maximum blocking fold of approximately [7.1]. Data are shown by drug molar concentration.



	Mouse_PD-1 Reporter Jurkat
EC50	4.126

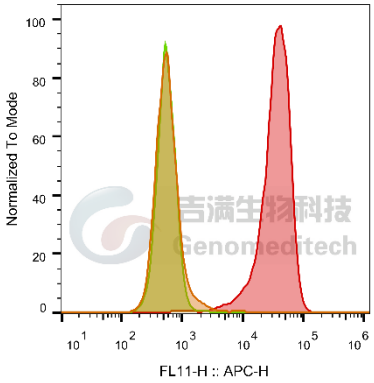
Figure 3 | Response to Anti-Mouse_PD1 mIgG1 Antibody. Mouse PDL1 aAPC CHO-K1 Cell Line (Cat. GM-C25791) was seeded at a density of 1E4 cells per well in a 96-well plate and incubated overnight. The next day, serial dilutions of the Anti-Mouse_PD1 mIgG1 Antibody (Cat. GM-28206AB) were incubated with 1E5 cells/well of the Mouse_PD-1 Reporter Jurkat Cell Line (Cat. GM-C25661) in a 96-well plate for 1 hour, and then added to the pre-seeded cells. The mixture was incubated for an additional 6 hours. Firefly luciferase activity is then measured using the ONE-Glo™ Luciferase Assay System (Promega/E6120). The results indicated a maximum blocking fold of approximately [6.9]. Data are shown by drug mass concentration.



	Mouse_PD-1 Reporter Jurkat
EC50	27.51

Figure 4 | Response to Anti-Mouse_PD1 mIgG1 Antibody. Mouse PDL1 aAPC CHO-K1 Cell Line (Cat. GM-C25791) was seeded at a density of 1E4 cells per well in a 96-well plate and incubated overnight. The next day, serial dilutions of the Anti-Mouse_PD1 mIgG1 Antibody (Cat. GM-28206AB) were incubated with 1E5 cells/well of the Mouse_PD-

1 Reporter Jurkat Cell Line (Cat. GM-C25661) in a 96-well plate for 1 hour, and then added to the pre-seeded cells. The mixture was incubated for an additional 6 hours. Firefly luciferase activity is then measured using the ONE-Glo™ Luciferase Assay System (Promega/E6120). The results indicated a maximum blocking fold of approximately [6.9]. Data are shown by drug molar concentration.



	SampleID	Geometric Mean : FL11-H
	Jurkat anti-Mouse_PD-1+APC-2nd Ab	587
	Mouse_PD-1 Reporter Jurkat M_IgG+APC-2nd Ab	568
	Mouse_PD-1 Reporter Jurkat anti-Mouse_PD-1+APC-2nd Ab	33477

Figure 5 | Mouse_PD-1 Reporter Jurkat Cell Line (Cat. GM-C25661) was determined by flow cytometry using Anti-Mouse_PD1 mIgG1 Antibody (Cat. GM-28206AB).

Cell Recovery

Recovery Medium: RPMI 1640+10% FBS+1% P.S

To insure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at -70°C. Storage at -70°C will result in loss of viability.

a) Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 - 3 minutes).

b) Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.

c) Transfer the vial contents to a centrifuge tube containing 5.0 mL complete culture medium. And spin at approximately 176 x g for 5 minutes. Discard supernatant.

d) Resuspend cell pellet with the recommended complete medium. And dispense the suspension into 1 - 2 T-25 culture flasks.

e) Incubate the culture at 37°C in a suitable incubator. A 5% CO_2 in air atmosphere is recommended if using the medium described on this product sheet.

Cell Freezing

Freezing Medium: 90% FBS+10% DMSO

a) Centrifuge at 176 x g for 3 minutes to collect cells.

b) Resuspend the cells in pre-cooled freezing medium and adjust the cell density to 5E6 cells/mL.

c) Aliquot 1 mL into each vial.

d) Place the vial in a controlled-rate freezing container and store at -80°C for at least 1 day, then transfer to liquid nitrogen as soon as possible.

Cell passage

Growth medium: RPMI 1640+10% FBS+1% P.S+3.5 μg/mL Blasticidin+0.75 μg/mL Puromycin

Approximately 48-72 hours after the initial thawing, the cells can be passaged for the first time. After this initial passage, the culture medium can be adjusted to growth medium supplemented with antibiotics. If cells are not passaged within 48 hours, it is recommended to add some fresh recovery medium and place the flask horizontally.

a) When the cell density reaches 1.5 - 2E6 cells/mL, subculture the cells. Do not allow the cell density to exceed 2E6 cells/mL.

b) It is recommended to use T-25 flasks for subculturing.

c) These cells are suspension cells, and it is recommended to use the "half-medium change" method to maintain optimal cell conditions during passaging.

d) During passaging, you can directly add fresh growth medium to the culture flask, gently pipette to resuspend the cells, and then transfer the cell suspension to a new T-25 flask for continued culture.

Subcultivation Ratio: Maintain cultures at a cell concentraion between 3E5 and 1E6 viable cells/mL.

Medium Renewal: Every 2 to 3 days

Notes

a) These cells are sensitive to density, so please ensure that the cell density is maintained within an appropriate range during culture and subculturing.

b) During the first passage, pay attention to the nutrient supply; if not subculturing, make sure to add fresh recovery medium every other day as needed.

Related Products

PD-1:PD-L1(B7-H1):PDL2	
Mouse_PDL1 KO MC38 Cell Line	aAPC(OKT3) PDL1 CHO-K1 Cell Line
H_PD-1 Reporter Jurkat Cell Line	H_PDCD1LG2(PDL2) aAPC CHO-K1 Cell Line
Mouse PDL1 aAPC CHO-K1 Cell Line	Canine_PD-1 HEK-293 Cell Line
Cynomolgus_PD1 CHO-K1 Cell Line	H_CD274(PD-L1) CHO-K1 Cell Line
H_CD274(PD-L1) MC38 Cell Line	H_PDCD1(PD-1) CHO-K1 Cell Line
H_PDCD1LG2(PDL2) CHO-K1 Cell Line	H_PD-L1 HEK-293 Cell Line
H_PDL1 LLC1(mouse_PDL1 KO) Cell Line	H_PDL1 MC38(mouse PDL1 KO) Cell Line
H_PD-L1 Raji Cell Line	M_PDCD1(PD-1) CHO-K1 Cell Line

Anti-Canine_PD1 mIgG2a Antibody(4F12-E6)	Anti-H_CD274(PDL1) hIgG1 Antibody(Atezolizumab)
Anti-H_PDCD1(PD1) hIgG1 Antibody(Budigalimab)	Anti-H_PDCD1LG2 mIgG1 Antibody(3G2)
Anti-mouse PD1 RIgG2a Antibody(RMP1-14)	Anti-mouse PD-L1 mIgG1 Antibody(10F.9G2)
Anti-Mouse_PD1 mIgG1 Antibody(29F.1A12)	Anti-mouse_PD1 mIgG1 Antibody(RMP1-14)
Anti-PD1 hIgG4 Antibody(Pembrolizumab)	Anti-PD1 hIgG4 Reference Antibody (Nivbio)
Anti-PD1 hIgG4 Reference Antibody (Pembio)	Anti-PD1 hIgG4 Reference Antibody (Sintbio)
Anti-PD-1 hIgG4 Reference Antibody (Torbio)	Anti-PD1 hIgG4 Reference Antibody(Cambio)
Anti-PD-1 hIgG4 Reference Antibody(Tislbio)	Anti-PD-L1 hIgG1 Reference Antibody(Avebio)
Anti-PDL1 hIgG4 Reference Antibody(Adebio)	Anti-PD-L2 hIgG1 Antibody(Hz25G4-1.1)
Biotinylated Human PD1 Protein; His-Avi Tag	Biotinylated Human PDL1 Protein; His-Avi Tag
Canine PD1 Protein; hFc Tag	Cynomolgus PDL1 Protein; His Tag
Human PD1 Protein; His Tag	Human PDL1 Protein; His Tag
Mouse PDL1 Protein; His Tag	

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