

Product Sheet

H_CD112R(PVRIG) Reporter Jurkat Cell Line

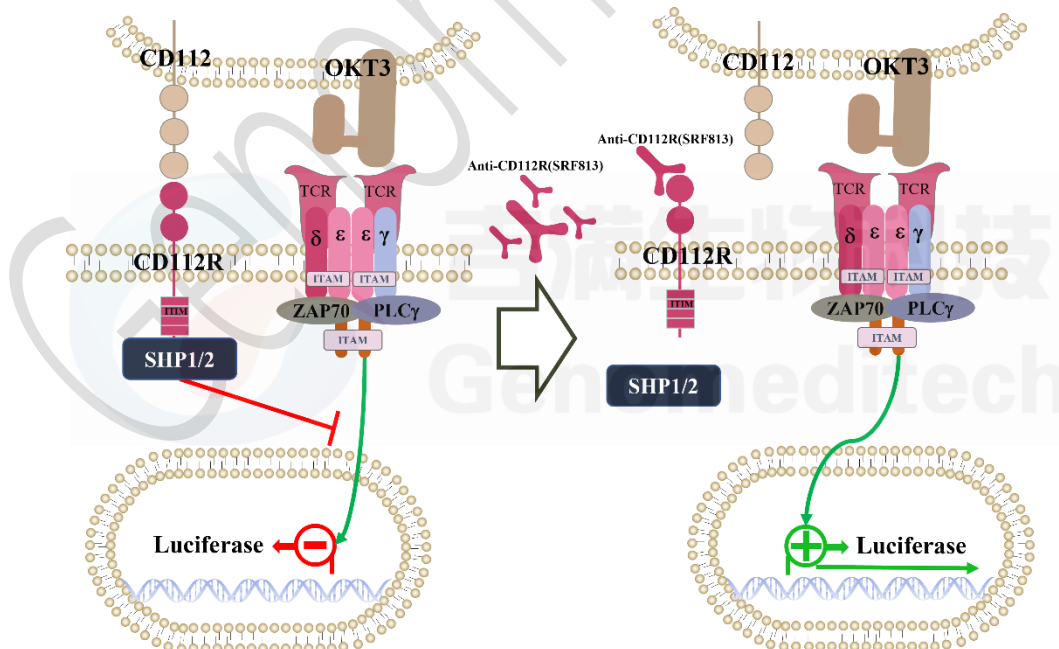
Catalog number: GM-C18952

Version 3.3.1.250109

CD112R (PVRIG) is an immune checkpoint receptor primarily expressed on T cells and natural killer (NK) cells. CD112R is a member of the immunoglobulin superfamily and binds to CD112 (Nectin-2), a ligand that is highly expressed on the surface of various tumor cells. The main function of CD112R is to inhibit the activation of T cells and NK cells by binding to CD112, thereby weakening the anti-tumor immune response in specific environments.

After CD112R binds to CD112, the ITIM motif is activated, subsequently recruiting inhibitory phosphatases (such as SHP-1 and SHP-2). These phosphatases dephosphorylate key signaling molecules, suppressing the signaling pathways mediated by T cell receptors (TCR) and NK cell activation receptors, thereby significantly reducing the activity of T cells and NK cells.

H_CD112R(PVRIG) Reporter Jurkat Cell Line is a clonal stable Jurkat cell line constructed using lentiviral technology, constitutive expression of the CD112R gene, endogenous expression of the TCR-CD3 complex, along with signal-dependent expression of a luciferase reporter gene. When CD112 binds to CD112R, it activates downstream signaling pathways, inhibit the expression of luciferase. Blockade antibodies can block this inhibitory signal transmission, restore the activation of T cells. The luciferase activity measurement indicates the activation level of the signaling pathway and can thus be used to evaluate the in vitro effects of drugs related to CD112R.



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
H_CD112 aAPC CHO-K1 Cell Line	Genomeditech/ GM-C18951
Anti-CD112R hIgG1 Antibody(SRF813)	Genomeditech/ GM-48167AB
GMOne-Step Luciferase Reporter Gene Assay Kit	Genomeditech/ GM-040503

Figures

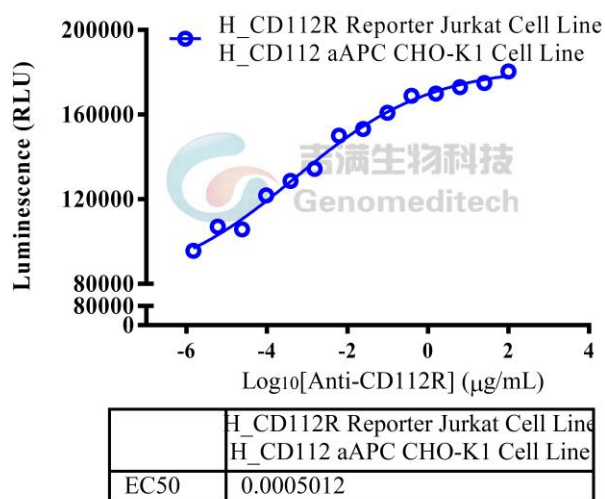


Figure 1 | Response to Anti-CD112R hIgG1 Antibody(SRF813). H_CD112 aAPC CHO-K1 Cell Line (Cat. [GM-C18951](#)) was seeded at a density of 2E4 cells/well in a 96-well plate and incubated overnight. The next day, serial dilutions of the Anti-CD112R hIgG1 Antibody(SRF813) (Cat. [GM-48167AB](#)) were incubated with 1E5 cells/well of the H_CD112R(PVRIG) Reporter Jurkat Cell Line (Cat. [GM-C18952](#)) 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 GMOne-Step Luciferase Reporter Gene Assay Kit (Cat. [GM-040503](#)). The results indicated a maximum blocking fold of approximately [2.1]. Data are shown by drug mass concentration.

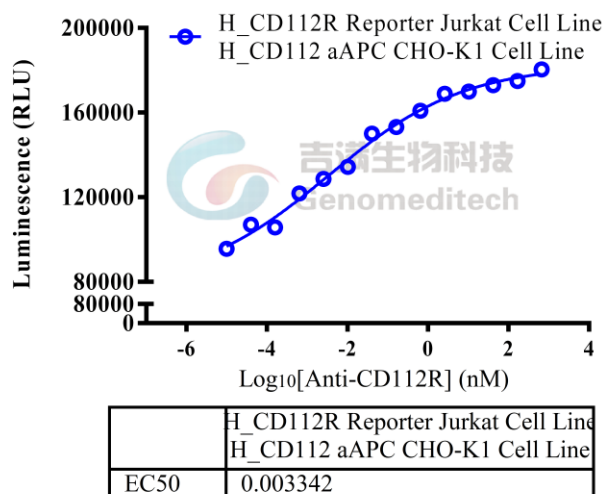


Figure 2 | Response to Anti-CD112R hIgG1 Antibody(SRF813). H_CD112 aAPC CHO-K1 Cell Line (Cat. [GM-C18951](#)) was seeded at a density of 2E4 cells/well in a 96-well plate and incubated overnight. The next day, serial dilutions of the Anti-CD112R hIgG1 Antibody(SRF813) (Cat. [GM-48167AB](#)) were incubated with 1E5 cells/well of the H_CD112R(PVRIG) Reporter Jurkat Cell Line (Cat. [GM-C18952](#)) 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 GMOne-Step Luciferase Reporter Gene Assay Kit (Cat. [GM-040503](#)). The results indicated a maximum blocking fold of approximately [2.1]. Data are shown by drug molar concentration.

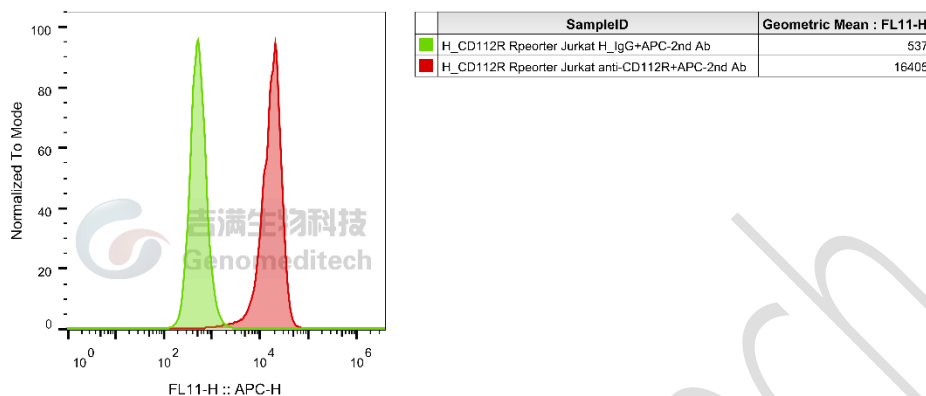


Figure 3 | H_CD112R(PVRIG) Reporter Jurkat Cell Line (Cat. GM-C18952) was determined by flow cytometry using Anti-CD112R hIgG1 Antibody(SRF813) (Cat. [GM-48167AB](#)).

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.

- 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).
- 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.
- 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.
- Resuspend cell pellet with the recommended complete medium. And dispense the suspension into 1 - 2 T-25 culture flasks.
- Incubate the culture at 37°C in a suitable incubator. A 5% CO₂ in air atmosphere is recommended if using the medium described on this product sheet.

Cell Freezing

Freezing Medium: 90% FBS+10% DMSO

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

CD112:CD112R(PVRIG)-CD226	
Cynomolgus_CD112R(PVRIG) CHO-K1 Cell Line	H_CD112 aAPC CHO-K1 Cell Line
H_CD112R(PVRIG) CHO-K1 Cell Line	H_CD112R(PVRIG) HEK-293 Cell Line
Anti-CD112R hIgG1 Antibody(SRF813)	Anti-H_NECTIN2(CD112) hIgG1 Antibody
Anti-H_PVRIG hIgG1 Antibody	

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