Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

Product Sheet

H_CD200R1 Blockade Reporter Cell Line

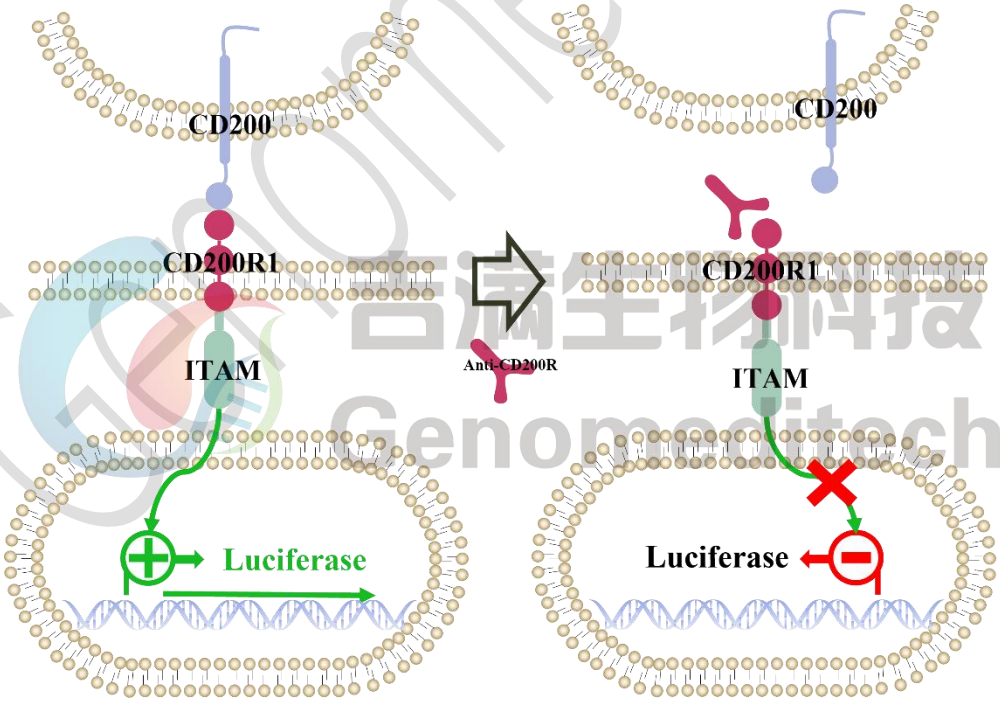
Catalog number: GM-C31022

Version 3.3.1.250108

CD200R1 is part of the CD200 receptor family, mainly found on immune cells like monocytes, macrophages, and dendritic cells. As an inhibitory receptor, it binds to CD200 to regulate immune responses and lower immune cell activity. CD200R1 is crucial for maintaining immune homeostasis and preventing excessive reactions, with its expression often changing in conditions like tumors and chronic inflammation, suggesting a role in immune evasion and self-tolerance.

The CD200R1 signaling pathway is activated by the binding of CD200 to CD200R1, resulting in inhibitory signal transduction. This interaction typically involves signaling molecules with SH2 domains, such as Src family kinases, which inhibit the proliferation of immune cells and cytokine production.

H_CD200R1 Blockade Reporter Cell Line is a clonal stable cell line constructed using lentiviral technology, constitutive expression of CD200R1 chimeric receptor gene, along with signal-dependent expression of a luciferase reporter gene. When CD200 binds to CD200R1, it activates downstream signaling pathways, leading to the expression of luciferase. Blockade antibodies can inhibit this signal transmission. 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 CD200R1.



Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

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.

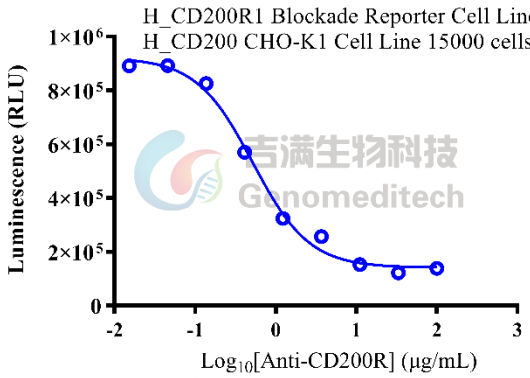
Materials

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_CD200 CHO-K1 Cell Line	Genomeditech/GM-C25422
Anti-CD200R hIgG4 Antibody	Genomeditech/GM-48240AB
GMOne-Step Luciferase Reporter Gene Assay Kit	Genomeditech/GM-040503

Genomeditech

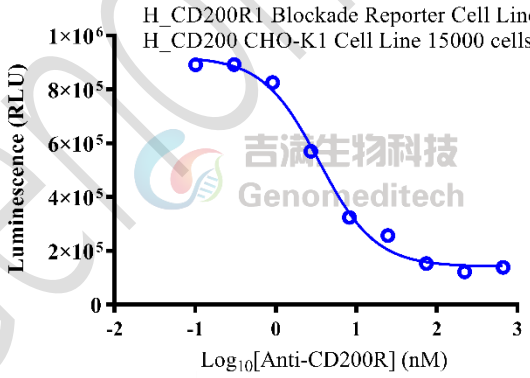
Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

Figures



	H_CD200R1 Blockade Reporter Cell Line H_CD200 CHO-K1 Cell Line
IC50	0.5204

Figure 1 | Response to Anti-CD200R hIgG4 Antibody. H_CD200 CHO-K1 Cell Line (Cat. GM-C25422) was seeded at a density of 1.5E4 cells/well in a 96-well plate and incubated overnight. The next day, serial dilutions of the Anti-CD200R hIgG4 Antibody (Cat. GM-48240AB) were incubated with 1E5 cells/well of the H_CD200R1 Blockade Reporter Cell Line (Cat. GM-C31022) in a 96-well plate for 1 hour, and then added to the pre-seeded cells. The mixture was incubated for an additional 15 hours. Firefly luciferase activity is then measured using the GMOne-Step Luciferase Reporter Gene Assay Kit (Cat. GM-040503). The results indicated maximum blocking folds of approximately [6.4]. Data are shown by drug mass concentration.



	H_CD200R1 Blockade Reporter Cell Line H_CD200 CHO-K1 Cell Line
IC50	3.469

Figure 2 | Response to Anti-CD200R hIgG4 Antibody. H_CD200 CHO-K1 Cell Line (Cat. GM-C25422) was seeded at a density of 1.5E4 cells/well in a 96-well plate and incubated overnight. The next day, serial dilutions of the Anti-CD200R hIgG4 Antibody (Cat. GM-48240AB) were incubated with 1E5 cells/well of the H_CD200R1 Blockade Reporter Cell Line (Cat. GM-C31022) in a 96-well plate for 1 hour, and then added to the pre-seeded cells. The mixture was incubated for an additional 15 hours. Firefly luciferase activity is then measured using the GMOne-Step

Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

Luciferase Reporter Gene Assay Kit (Cat. GM-040503). The results indicated maximum blocking folds of approximately [6.4]. Data are shown by drug molar concentration.

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

CD200 CD200R	
Cynomolgus_CD200R1 CHO-K1 Cell Line	H_CD200 CHO-K1 Cell Line
H_CD200R1 CHO-K1 Cell Line	H_CD200R1 HEK-293 Cell Line
Anti-CD200R hIgG4 Antibody	Anti-CD200R hIgG4 Antibody(I-4P)
Anti-H_CD200 hIgG Antibody(Samalizumab)	Anti-H_CD200R hIgG1 Antibody(huDX182)

Limited Use License Agreement

Genomeditech (Shanghai) Co., Ltd grants to the Licensee all intellectual property rights, exclusive, non-transferable, and non-sublicensable rights of the Licensed Materials; Genomeditech (Shanghai) Co., Ltd will retain ownership of the Licensed Materials, cell line history packages, progeny, and the Licensed Materials including modified materials.

Between Genomeditech (Shanghai) Co., Ltd, and Licensee, Licensee is not permitted to modify cell lines in any way. The Licensee shall not share, distribute, sell, sublicense, or otherwise provide the Licensed Materials, or progenitors to third parties such as laboratories, departments, research institutions, hospitals, universities, or biotechnology companies for use other than for the purpose of outsourcing the Licensee's research.

Please refer to the Genomeditech Cell Line License Agreement for details.