

Product Sheet

ADCP FcγRIIa DDX35™ Jurkat Effector Cell Line

Catalog number: GM-C27728

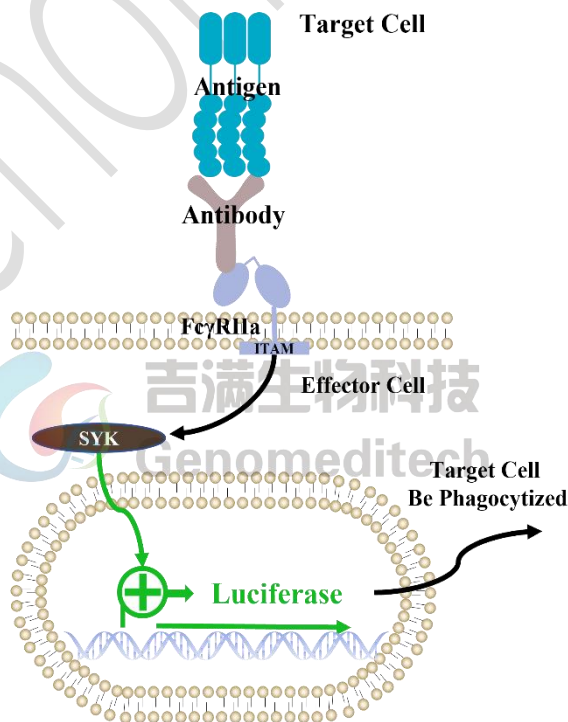
Version 3.3.1.260912

ADCP, or antibody-dependent cellular phagocytosis, refers to the process by which immune cells expressing Fc receptors recognize and phagocytose target cells that are specifically bound by antibodies. FcγRIIa (CD32) is a receptor for the Fc region of immunoglobulin G (IgG) and belongs to the Fc receptor family.

FcγRIIa's signal transduction occurs via its short cytoplasmic tail. When it binds IgG, the receptor activates downstream pathways, recruiting and activating tyrosine kinases like Syk and Src family kinases. These kinases then activate phosphoinositide 3-kinase (PI3K) and Ras/MAPK pathways, resulting in increased intracellular calcium, cytokine release, and cell proliferation.

ADCP FcγRIIa DDX35™ Jurkat Effector Cell Line is a clonal stable Jurkat cell line constructed using lentiviral technology, constitutive expression of the FcγRIIa gene, along with signal-dependent expression of a luciferase reporter gene. When IgG binds to target cells and effector cells, it leads to the expression of luciferase, which can be used to evaluate the biological activity of antibodies in the mechanism of ADCP.

ADCP FcγRIIa DDX35™ Jurkat Effector Cell Line was obtained through extensive monoclonal screening and multiple rounds of monoclonal selection. It possesses high stability, high sensitivity, and high amplification properties, meeting the standards for customers' batch library construction and release experiments.



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	gibco/C11875500BT
Fetal Bovine Serum	ExCell/FSP500
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/ GM-040404
Puromycin	Genomeditech/ GM-040401
H_CLDN18.2(isoform2) CHO-K1 Cell Line	Genomeditech/ GM-C05273
Anti-CLDN18.2 hIgG1 Antibody(Zolbetuximab)	Genomeditech/ GM-34137AB
ABflo® 647 Rabbit anti-Human CD32 mAb	abclonal/A27966
Anti-CD20 hIgG1 Reference Antibody(Ritubio)	Genomeditech/ GM-87804MAB
GMOne-Step 2.0 Luciferase Reporter Gene Assay Kit	Genomeditech/ GM-040513

Figures

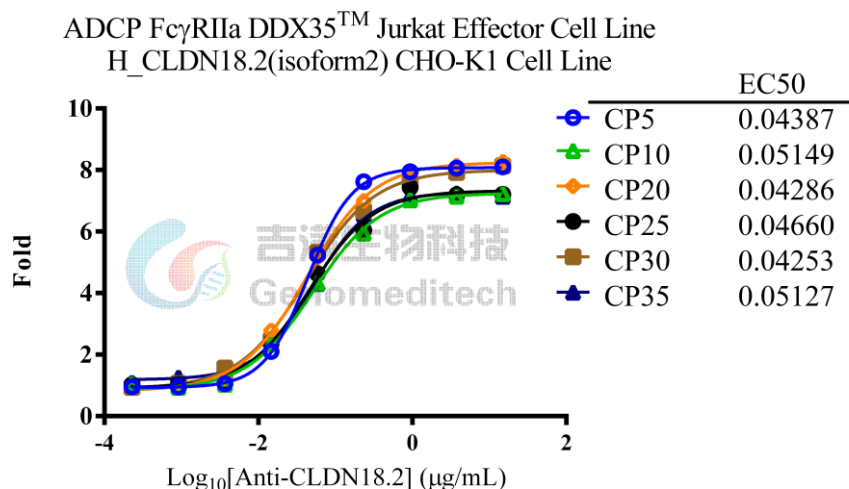


Figure 1 | The passage stability of response to Anti-CLDN18.2 hIgG1 Antibody. Serial dilutions of the Anti-CLDN18.2 hIgG1 Antibody(Zolbetuximab) (Cat. [GM-34137AB](#)) and 1E5 cells/well of the passage 5, 10, 20, 25, 30 and 35 of the ADCP FcγRIIa DDX35™ Jurkat Effector Cell Line (Cat. [GM-C27728](#)) were added to 1.5E4 cells/well of H_CLDN18.2(isoform2) CHO-K1 Cell Line (Cat. [GM-C05273](#)) for 6 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). Data are shown by drug mass concentration.

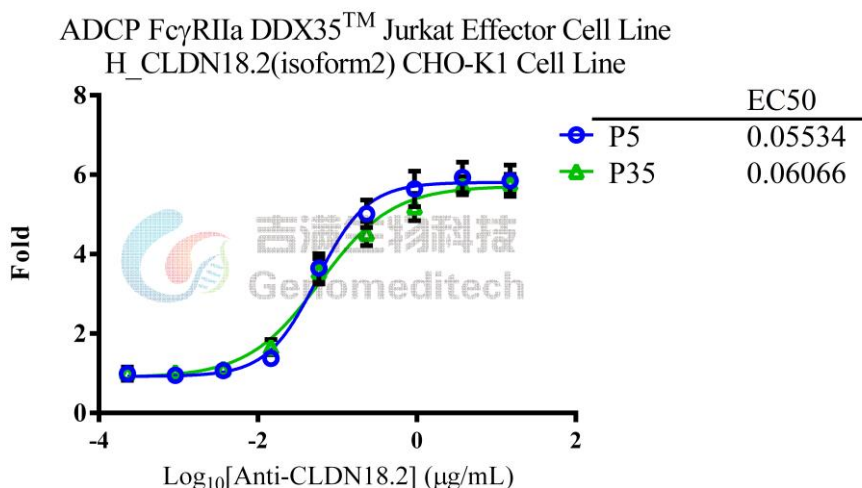


Figure 2 | The passage stability of response to Anti-CLDN18.2 hIgG1 Antibody. Serial dilutions of the Anti-CLDN18.2 hIgG1 Antibody(Zolbetuximab) (Cat. [GM-34137AB](#)) and 1E5 cells/well of the passage 5 and 35 of the ADCP FcγRIIa DDX35™ Jurkat Effector Cell Line (Cat. [GM-C27728](#)) were added to 1.5E4 cells/well of H_CLDN18.2(isoform2) CHO-K1 Cell Line (Cat. [GM-C05273](#)) for 6 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). Data are shown by drug mass concentration.

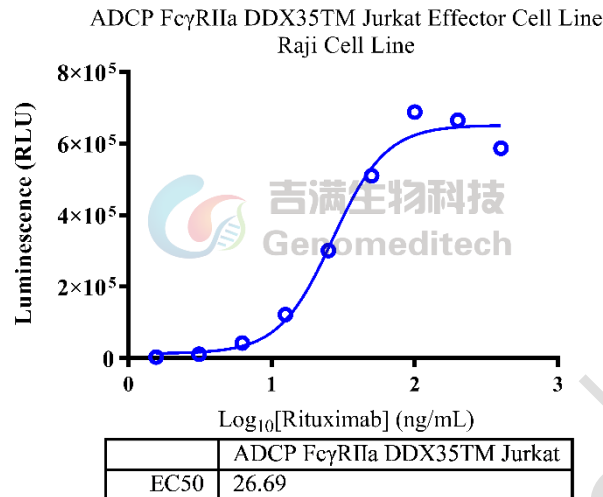


Figure 3 | Rituximab-mediated ADCP assays on Raji cells. The ADCP FcγRIIa DDX35™ Jurkat Effector Cell Line (Cat. GM-C27728) at a density of 1E5 cells/well was co-cultured with Raji cells that express CD20 endogenously at a density of 2E4 cells/well, in the presence of serial dilutions of the Anti-CD20 hIgG1 Reference Antibody (Ritubio) (Cat. GM-87804MAB) in assay buffer (RPMI 1640+1%PS+1%FBS) for 6 hours (96-well format). The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [450.3]. Data are shown by drug mass concentration.

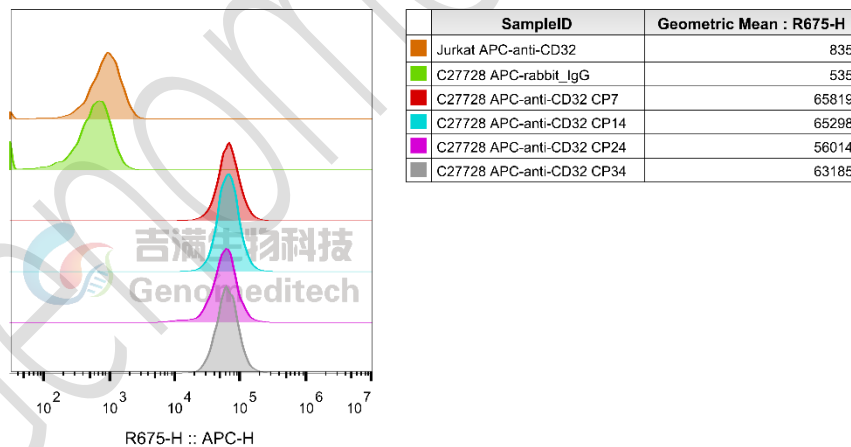


Figure 4 | The passage stability of the ADCP FcγRIIa DDX35™ Jurkat Effector Cell Line (Cat. GM-C27728) was determined by flow cytometry using ABflo® 647 Rabbit anti-Human CD32 mAb (abclonal/A27966).

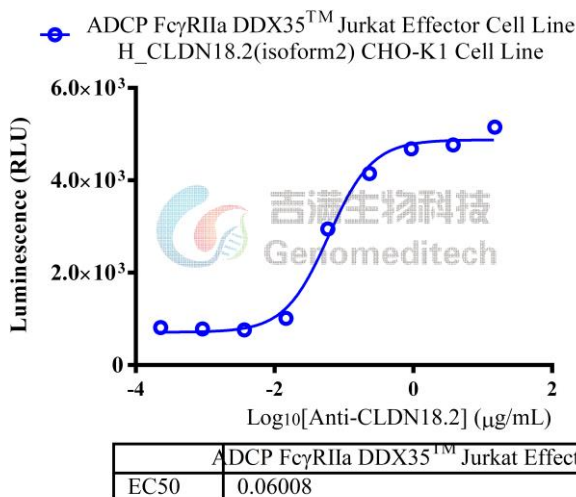


Figure 5 | Rituximab-mediated ADCP assays on H_CLDN18.2(isoform2) CHO-K1 cells. The ADCP FcγRIIa DDX35TM Jurkat Effector Cell Line(Cat. GM-C27728) at a density of 1E5 cells/well was co-cultured with H_CLDN18.2(isoform2) CHO-K1 Cell Line (Cat. [GM-C05273](#)), in the presence of serial dilutions of the Anti-CLDN18.2 hIgG1 Antibody(Zolbetuximab) (Cat. [GM-34137AB](#)) in assay buffer (RPMI 1640+1%PS+1%FBS) for 6 hours (96-well format). The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech).

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.
- Aliquot 1 mL into each vial.
- 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.

- When the cell density reaches 1.5 - 2E6 cells/mL, subculture the cells. Do not allow the cell density to exceed 2E6 cells/mL.
- It is recommended to use T-25 flasks for subculturing.
- These cells are suspension cells, and it is recommended to use the "half-medium change" method to maintain optimal cell conditions during passaging.
- 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

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

FcγR	
H_CD32B aAPC CHO-K1 Cell Line	Cynomolgus_FcRn MDCK Cell Line
H_FCGR1A(CD64) CHO-K1 Cell Line	H_FCGR1A(CD64) HEK-293 Cell Line
H_FCGR2A(CD32A) CHO-K1 Cell Line	H_FCGR2B(CD32B) CHO-K1 Cell Line
H_FCGR3A(CD16a) 158F CHO-K1 Cell Line	H_FCGR3A(CD16a) 158V CHO-K1 Cell Line
H_FCGR3B(CD16b) CHO-K1 Cell Line	H_FcRn CHO-K1 Cell Line
H_FcRn MDCK Cell Line	H_FcRn-GFP HEK-293 Cell Line
Mouse_FcγRIV FcγRIIb aAPC CHO-K1 Cell Line	Mouse_FcγRIV FcγRIIb CHO-K1 Cell Line
Mouse_FcRn MDCK Cell Line	

Anti-FcRn hIgG4 Reference Antibody(Rozabio)	Anti-H_FcRn IgG4 Antibody(Rozanolixizumab)
Anti-Mouse CD16/32 mIgG2b Antibody(2.4G2)	
Human IgG1 Fc Protein; His Tag	
ADCCP	
ADCC FcγRIIIa(158F) Jurkat Effector Cell Line	ADCC FcγRIIIa(158V) DDX35TM Jurkat Effector Cell Line
ADCC FcγRIIIa(158V) Jurkat Effector Cell Line	ADCC FcγRIIIa(158V) Reporter Jurkat(CD3 KO) Cell Line
ADCC FcγRIIIa(158V) Reporter Jurkat(CD3 KO) Cell Line	ADCC FcγRIIIa(158V) Reporter NK-92 Cell Line
ADCC M_FcγRIV Jurkat Effector Cell Line	ADCP FcγRI Jurkat Effector Cell Line
ADCP FcγRIIa Jurkat Effector Cell Line	ADCP FcγRIIa R131 Jurkat Effector Cell Line
ADCP FcγRIIb Jurkat Effector Cell Line	

License Agreement:

By purchasing and using this cell line product, the user voluntarily agrees to accept and abide by the following policies:

- This cell line product is restricted to research use only and shall not be used for any commercial purposes.
- This product is strictly prohibited from being used in the diagnosis or treatment of human or animal diseases, and shall not be directly used in experiments involving humans.
- Users and their contractors engaged for their benefit may use this material and its derivatives only within the agreed research scope; modification of the material is not permitted, nor may it be distributed, sold, transferred, or otherwise provided to any other entity (including affiliates).
- If use beyond the above scope is required, prior written permission from Genomeditech (Shanghai) Co.,Ltd. must be obtained. For details, please contact Genomeditech (Shanghai) Co.,Ltd.