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

Product Sheet

H_BDCA2 Reporter Jurkat Cell Line

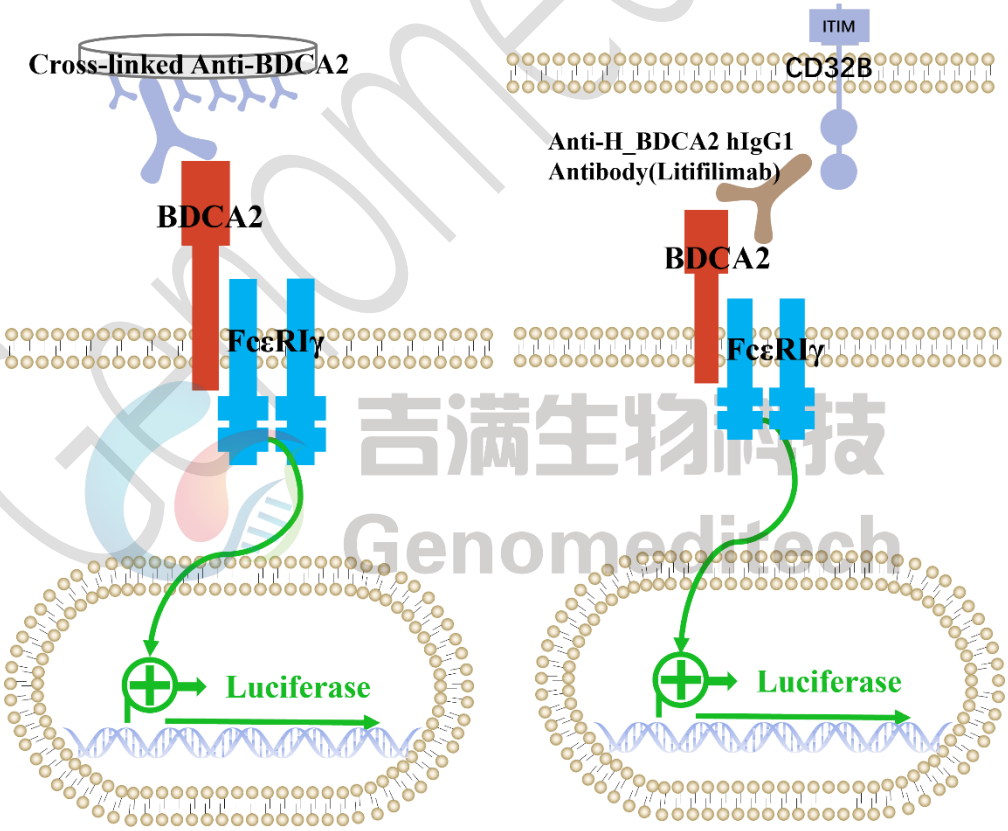
Catalog number: GM-C13225

Version 3.3.1.260709

Blood dendritic cell antigen 2 (BDCA2) is a C-type lectin that is expressed on plasmacytoid dendritic cells (pDC) and is associated with the pathogenesis of lupus. BDCA2 is composed of a single extracellular carbohydrate recognition domain (CRD) at its C-terminus, which belongs to the class II C-type lectin group, a transmembrane region, and a short cytoplasmic tail at its N-terminus that lacks a signaling motif. BDCA2 transmits intracellular signals through the associated transmembrane adaptor FcεRIγ, inducing B cell receptor (BCR)-like signaling cascades. However, the effectiveness of using humanized anti-BDCA2 monoclonal antibodies to reduce disease activity in patients with cutaneous lupus has not been extensively studied.

H_BDCA2 Reporter Jurkat Cell Line is a clonal stable Jurkat cell line constitutively expressing human BDCA2 and FcεRIγ gene, along with signal-dependent expression of a luciferase reporter gene.

The binding of the precoated agonistic antibodies to BDCA2 activates downstream reporter genes, leading to luciferase expression. The luciferase readout represents the activation level of the signaling pathway and can thus be used for evaluating the in vitro effects of related drugs of BDCA2.



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	PRMI 1640+10% FBS+1% P.S+3.5 μg/mL Blasticidin+400 μg/mL G418+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.

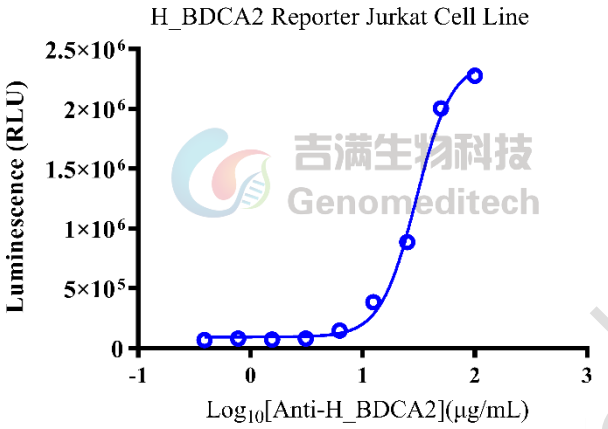
Materials

Reagent	Manufacturer/Catalogue No.
RPMI 1640	gibco/C11875500BT
Fetal Bovine Serum	ExCell/FSP500
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/GM-040404
G418	Genomeditech/GM-040402
Puromycin	Genomeditech/GM-040401
Clear Flat-Bottom Immuno Nonsterile 96-Well Plates	Thermo/442404
H_FCGR2B(CD32B) CHO-K1 Cell Line	Genomeditech/GM-C16925
H_FCGR2A(CD32A) CHO-K1 Cell Line	Genomeditech/GM-C24472
Anti-H_BDCA2 hIgG1 Antibody(Litifilimab)	Genomeditech/GM-31294AB
GMOne-Step 2.0 Luciferase Reporter Gene Assay Kit	Genomeditech/GM-040513

Genomeditech

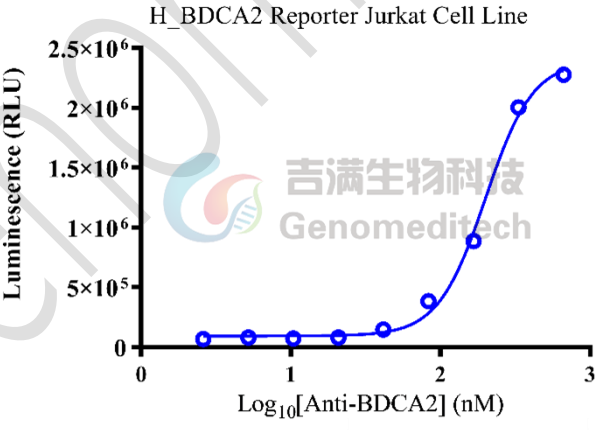
Genomeditech (Shanghai) Co.,Ltd.
Order: +86 021-68455258/50432826/50432825
Toll-free: +86 400 627 9288
Email: service@genomeditech.com

Figures



	H_BDCA2 Reporter Jurkat Cell Line
EC50	30.08

Figure 1 | Response to Anti-H_BDCA2 hIgG1 Antibody(Litifilimab). The Anti-H_BDCA2 hIgG1 Antibody (Litifilimab, Cat. GM-31294AB) was coated onto a 96-well plate overnight at 4°C. Subsequently, the H_BDCA2 Reporter Jurkat Cell Line (Cat. GM-C13225) was diluted in assay buffer (RPMI 1640 + 1% FBS + 1% P.S) to a concentration of 1E5 cells per well, and the cells were incubated with the coated antibody for an additional 24 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [33]. Data are shown by drug mass concentration.



	H_BDCA2 Reporter Jurkat Cell Line
EC50	200.5

Figure 2 | Response to Anti-H_BDCA2 hIgG1 Antibody(Litifilimab). The Anti-H_BDCA2 hIgG1 Antibody (Litifilimab, Cat. GM-31294AB) was coated onto a 96-well plate overnight at 4°C. Subsequently, the H_BDCA2 Reporter Jurkat Cell Line (Cat. GM-C13225) was diluted in assay buffer (RPMI 1640 + 1% FBS + 1% P.S) to a concentration of 1E5 cells per well, and the cells were incubated with the coated antibody for an additional 24 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [33]. Data are shown by drug molar concentration.

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

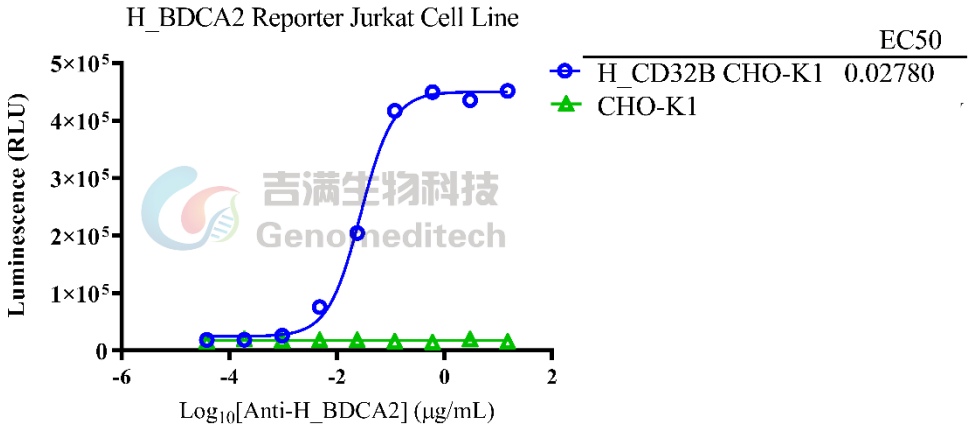


Figure 3 | Response to Anti-H_BDCA2 hIgG1 Antibody. The H_FCGR2B (CD32B) CHO-K1 Cell Line (Cat. GM-C16925) and the CHO-K1 Cell Line were seeded at a density of 1E4 cells per well in a 96-well plate and incubated overnight. The next day, serial dilutions of Anti-H_BDCA2 hIgG1 Antibody (Litifilimab, Cat. GM-31294AB) and the H_BDCA2 Reporter Jurkat Cell Line (Cat. GM-C13225) at a concentration of 1E5 cells per well were added to the pre-seeded cells. The mixture was incubated for an additional 16 hours. Firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [26.7]. Data are presented based on drug mass concentration.

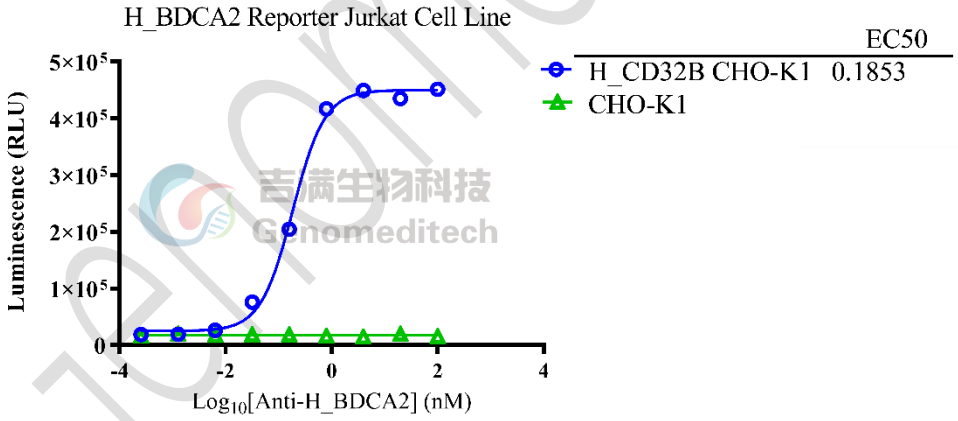


Figure 4 | Response to Anti-H_BDCA2 hIgG1 Antibody. The H_FCGR2B (CD32B) CHO-K1 Cell Line (Cat. GM-C16925) and the CHO-K1 Cell Line were seeded at a density of 1E4 cells per well in a 96-well plate and incubated overnight. The next day, serial dilutions of Anti-H_BDCA2 hIgG1 Antibody (Litifilimab, Cat. GM-31294AB) and the H_BDCA2 Reporter Jurkat Cell Line (Cat. GM-C13225) at a concentration of 1E5 cells per well were added to the pre-seeded cells. The mixture was incubated for an additional 16 hours. Firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately [26.7]. Data are presented based on drug molar concentration.

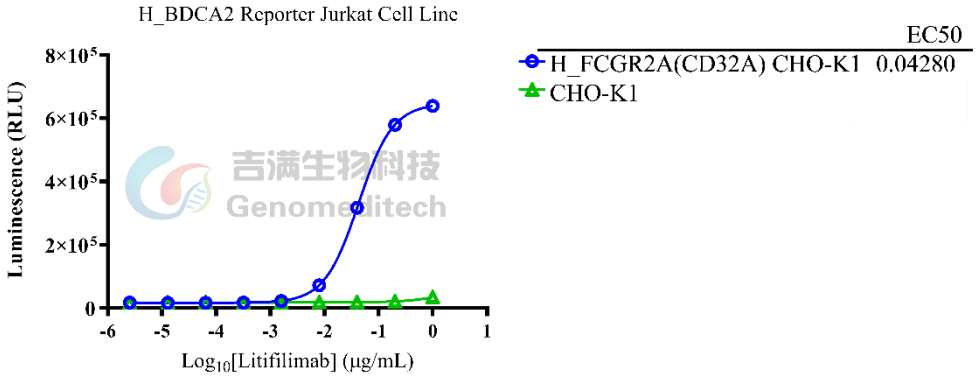


Figure 5 | Response to Anti-H_BDCA2 hIgG1 Antibody(Litifilimab). The H_FCGR2A(CD32A) CHO-K1 Cell Line (Cat. GM-C24472) and the CHO-K1 Cell Line were seeded at a density of 1E4 cells per well in a 96-well plate and incubated overnight. The next day, serial dilutions of Anti-H_BDCA2 hIgG1 Antibody (Litifilimab, Cat. GM-31294AB) and the H_BDCA2 Reporter Jurkat Cell Line (Cat. GM-C13225) at a concentration of 1E5 cells per well were added to the pre-seeded cells. The mixture was incubated for an additional 16 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction fold was approximately[37.4]. Data are shown by drug mass concentration.

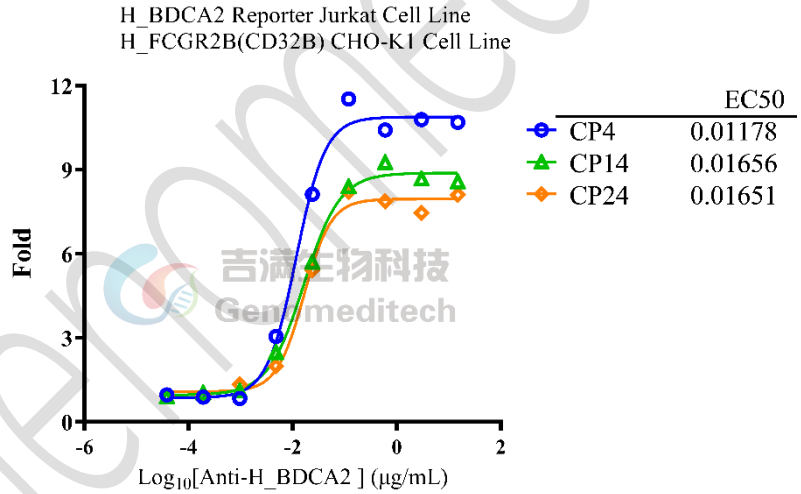
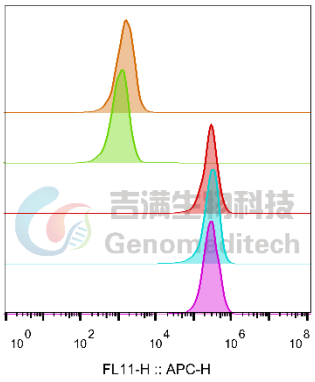


Figure 6 | The passage stability of response to Anti-H_BDCA2 hIgG1 Antibody. The H_FCGR2B (CD32B) CHO-K1 Cell Line (Cat. GM-C16925) was seeded at a density of 1E4 cells per well in a 96-well plate and incubated overnight. The next day, serial dilutions of Anti-H_BDCA2 hIgG1 Antibody (Litifilimab, Cat. GM-31294AB) and the passage 4, 14, and 24 of H_BDCA2 Reporter Jurkat Cell Line (Cat. GM-C13225) at a concentration of 1E5 cells per well were added to the pre-seeded cells. The mixture was incubated for an additional 16 hours. Firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). Data are presented based on drug mass concentration.



SampleID	Geometric Mean : FL11-H
Jurkat anti-H_BDCA2+APC-2nd Ab	1470
H_BDCA2 Reporter Jurkat H_IgG+APC-2nd Ab	1098
H_BDCA2 Reporter Jurkat anti-H_BDCA2+APC-2nd Ab CP3	260264
H_BDCA2 Reporter Jurkat anti-H_BDCA2+APC-2nd Ab CP13	271570
H_BDCA2 Reporter Jurkat anti-H_BDCA2+APC-2nd Ab CP23	266168

Figure 7 | The passage stability of the H_BDCA2 Reporter Jurkat Cell Line (Cat. GM-C13225) was determined by flow cytometry using Anti-H_BDCA2 hIgG1 Antibody (litifilimab) (Cat. GM-31294AB).

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.

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

Cell passage

Growth medium: PRMI 1640+10% FBS+1% P.S+3.5 μg/mL Blasticidin+400 μg/mL G418+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

CD40:CD40L	
H_CD40(TNFRSF5) Reporter 293 Cell Line	H_CD40(TNFRSF5) Reporter Jurkat Cell Line
Cynomolgus_CD40 CHO-K1 Cell Line	Cynomolgus_CD40L CHO-K1 Cell Line
H_CD40(TNFRSF5) CHO-K1 Cell Line	H_CD40(TNFRSF5) HEK-293 Cell Line
H_CD40L CHO-K1 Cell Line	H_CD40L HEK-293 Cell Line
Mouse_CD40L CHO-K1 Cell Line	Rabbit_CD40L NIH-3T3 Cell Line
Anti-CD40 hIgG1 Reference Antibody (Sotibio)	Anti-CD40 hIgG1 Reference Antibody (Tenebio)
Anti-CD40L hIgG1 Reference Antibody (Frebio)	Anti-H_CD40 hIgG1 Antibody(APX005M)
Anti-H_CD40 hIgG1 Antibody(ravagalimab)	Anti-H_CD40L hIgG1 Antibody(dapirolizumab)
Anti-H_CD40L hIgG1 Antibody(frexalimab)	
Biotinylated Human CD40 Protein; His-Avi Tag	Cynomolgus CD40 Protein; His Tag
Human CD40 Protein; His Tag	Human CD40L Protein; His Tag
IFN-α	
IFNα Reporter HEK-293 Cell Line	IFNα Reporter MDCK Cell Line
IFNα Reporter THP1 Cell Line	

BCMA:BAFFR:TACI	
H_BAFFR Jurkat Blockade Reporter Cell Line	H_BAFFR Reporter Cell Line
H_BCMA Reporter Cell Line	H_TACI Reporter Cell Line
Cynomolgus_BCMA CHO-K1 Cell Line	Cynomolgus_BCMA HEK-293 Cell Line
H_BAFFR CHO-K1 Cell Line	H_BAFFR HEK-293 Cell Line
H_BCMA CHO-K1 Cell Line	H_BCMA HEK-293 Cell Line
Membrane Bound H_APRIL(Trimer) HEK-293 Cell Line	
Anti-BAFF hIgG1 Antibody(belimumab)	Anti-BAFFR hIgG1 Antibody(ianalumab)
Anti-BCMA hIgG1 Antibody(Belantamab)	Anti-BCMA hIgG1 Antibody(SEA-BCMA)
Anti-BCMA hIgG4 Antibody(BCMB69)	Anti-CD3E×BCMA hIgG4 Reference Antibody (Tecbio)
Anti-TNFSF13B(BAFF) hIgG1 Reference Antibody (Belibio)	
Biotinylated Human BAFF Protein; His-Avi Tag	Biotinylated Human BCMA Protein; His-Avi Tag
Cynomolgus BAFF Protein; His Tag	Cynomolgus BCMA Protein; hFc Tag
Cynomolgus BCMA Protein; His Tag	Human APRIL Protein; hFc Tag
Human BCMA Protein; hFc Tag	Human BCMA Protein; His Tag
Mouse BAFF Protein; His Tag	
BDCA2(CLEC4C)	
H_BDCA2 Reporter DDX35TM Jurkat Cell Line	Cynomolgus_BDCA2 CHO-K1 Cell Line
Cynomolgus_BDCA2 Jurkat Cell Line	H_BDCA2 CHO-K1 Cell Line
H_BDCA2 HEK-293 Cell Line	H_BDCA2 Jurkat Cell Line
Anti-H_BDCA2 hIgG1 Antibody(Litifilimab)	
Cynomolgus BDCA2 Protein; His Tag	Human BDCA2 Protein; His Tag

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.