Genomeditech (Shanghai) Co.,Ltd.
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Product Sheet

H_IL-31RA OSMR Baf3 Cell Line

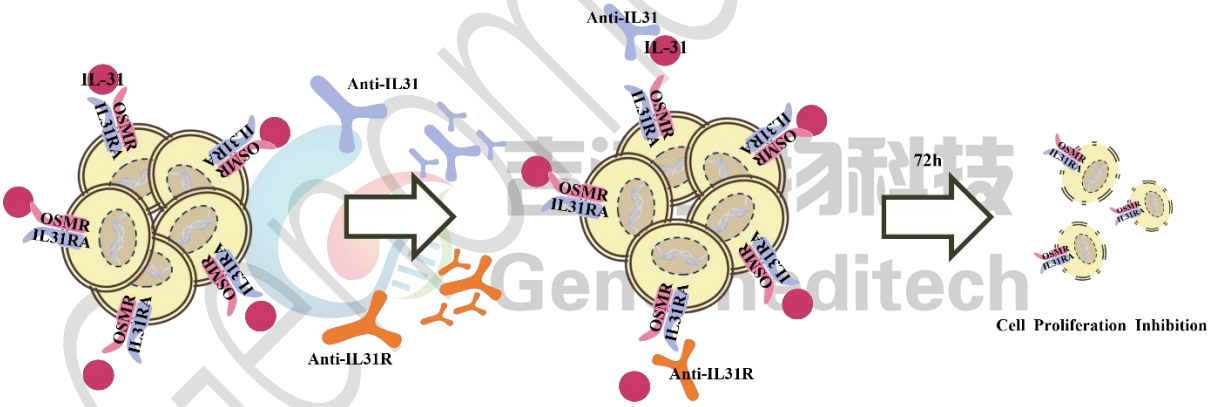
Catalog number: GM-C29783

Version 3.3.1.250325

Interleukin-31 (IL-31) is a novel cytokine whose receptor shares similarity with the IL-6 receptor, and it is therefore classified as part of the IL-6 cytokine family. It is primarily secreted by activated CD4+ T lymphocytes, particularly activated Th2 helper T cells, mast cells, macrophages, and dendritic cells. IL-31 mainly regulates cell-mediated immunity in the skin by sensing itching in the peripheral nervous system, modulates lung immunity by increasing airway inflammation, and adjusts intestinal immunity by defending against microorganisms.

IL-31 transmits signals by forming a heterodimeric receptor complex composed of IL31RA and OSMR (oncostatin M receptor). Its signaling pathway is closely linked to chronic pruritic skin conditions, such as atopic dermatitis. Monoclonal antibody therapies targeting IL-31 or IL-31 receptors can effectively reduce itching and sleep disturbances, improve skin lesions, and minimize the use of topical steroids.

H_IL-31RA OSMR Baf3 Cell Line is a clonal stable BaF3 cell line constructed using lentiviral technology, constitutive expression of the human IL-31RA and human OSMR gene. Can be used for the development and validation of related drugs.



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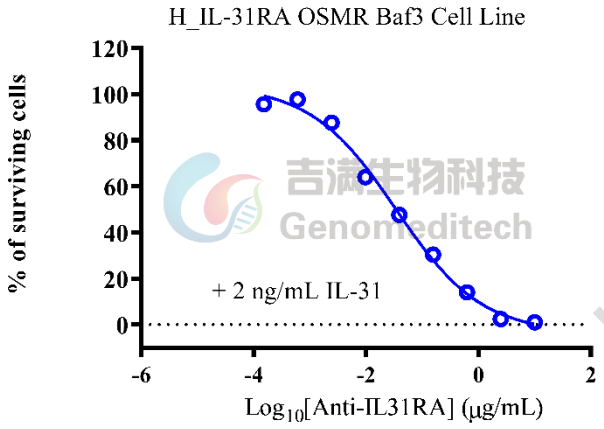
Specifications

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+8 ng/mL M_IL3
Growth medium	RPMI 1640+10% FBS+1% P.S+8 ng/mL M_IL3+50 μg/mL G418+0.25 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

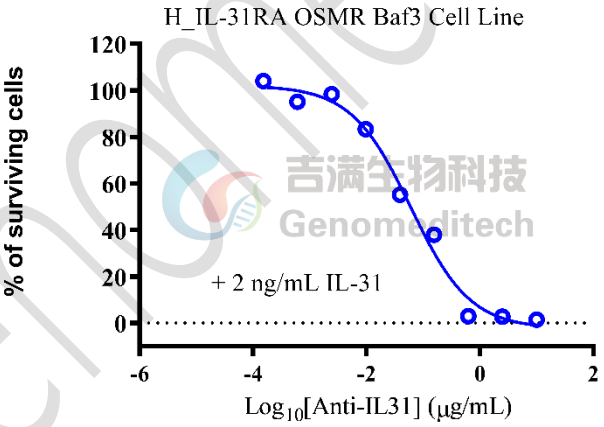
Reagent	Manufacturer/Catalogue No.
RPMI 1640	VivaCell/C3010-0500
Fetal Bovine Serum	Cegrogen biotech/A0500-3010
Pen/Strep	Thermo/15140-122
Recombinant Mouse IL-3 (C-6His)	Novoprotein/CP39
G418	Genomeditech/GM-040402
Puromycin	Genomeditech/GM-040401
Anti-IL31RA hIgG2 Antibody(Nemolizumab)	Genomeditech/GM-50871AB
Anti-IL31 hIgG1 Antibody(mAb33)	Genomeditech/GM-50883AB
Anti-OSMR hIgG4 Antibody(Vixarelimab)	Genomeditech/GM-50874AB
Recombinant Human IL-31 Protein	Sino Biological/11557-H08H
GMTiter™ Luminescent Cell Viability Assay 细胞活力检测试剂盒	Genomeditech/GM-040504

Figures



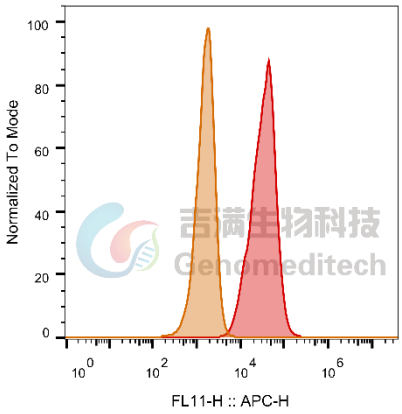
	H_IL-31R OSMR BAF3 Cell Line
IC50	0.03415

Figure 1 | Cell proliferation assay. The H_IL-31RA OSMR Baf3 Cell Line (Cat. GM-C29783) at a concentration of 1E4cells/well (96-well format) was treated with serial dilutions of Anti-IL31RA hIgG2 Antibody(Nemolizumab)(Cat. GM-50871AB) in assay buffer (RPMI 1640 + 10% FBS + 1% P.S) for 72 hours. The firefly luciferase activity was measured the GMTiter™ Luminescent Cell Viability Assay (Cat. GM-040504).



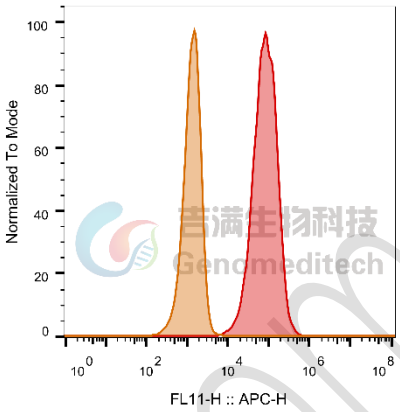
	H_IL-31R OSMR BAF3 Cell Line
IC50	0.06052

Figure 2 | Cell proliferation assay. The H_IL-31RA OSMR Baf3 Cell Line (Cat. GM-C29783) at a concentration of 1E4cells/well (96-well format) was treated with serial dilutions of Anti-IL31 hIgG1 Antibody(mAb33)(Cat. GM-50883AB) in assay buffer (RPMI 1640 + 10% FBS + 1% P.S) for 72 hours. The firefly luciferase activity was measured the GMTiter™ Luminescent Cell Viability Assay (Cat. GM-040504).



SampleID	Geometric Mean : FL11-H
Baf3 anti-OSMR+APC-2nd Ab	1559
Baf3 H_IL-31R 0SMR anti-OSMR+APC-2nd Ab	32789

Figure 3 | H_IL-31RA OSMR Baf3 Cell Line (Cat. GM-C29783) was determined by flow cytometry using Anti-OSMR hIgG4 Antibody(Vixarelimab) (Cat. GM-C29783).



SampleID	Geometric Mean : FL11-H
Baf3 anti-IL31RA+APC-2nd Ab	1317
Baf3 H_IL-31R 0SMR anti-IL31RA+APC-2nd Ab	80071

Figure 4 | H_IL-31RA OSMR Baf3 Cell Line (Cat. GM-C29783) was determined by flow cytometry using Anti-IL31RA hIgG2 Antibody(Nemolizumab)(Cat. GM-50871AB).

Cell Recovery

Recovery Medium: RPMI 1640+10% FBS+1% P.S+8 ng/mL M_IL3

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.

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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 vials 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+8 ng/mL M_IL3+50 μg/mL G418+0.25 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 - 1.2E6 cells/mL, subculture the cells. Do not allow the cell density to exceed 1.4E6 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

OX40	
H_OX40 Reporter Cell Line	Cynomolgus_OX40L CHO-K1 Cell Line
H_OX40 CHO-K1 Cell Line	H_OX40L CHO-K1 Cell Line
H_OX40L HEK-293 Cell Line	
Anti-H_OX40 hIgG2 Antibody(Ivuxolimab)	Anti-OX40L hIgG1 Reference Antibody(Oxebio)
Anti-OX40L hIgG4 Antibody(Amlitelimab)	Anti-OX40L hIgG4 Reference Antibody(Amlbio)
Biotinylated Human OX40L Protein; His-Avi Tag	Cynomolgus OX40 Protein; His Tag
Cynomolgus OX40L Protein; His Tag	Cynomolgus OX40L Protein; mFc Tag
Human OX40 Protein; His Tag	Human OX40L Protein; His Tag
Human OX40L Protein; mFc Tag	
IL-4/IL-13	
IL-4 Reporter Cell Line	IL-4/IL-13 Reporter 293 Cell Line
IL-4/IL-13 Reporter 293 DDX35TM Cell Line	Cynomolgus_IL4R CHO-K1 Cell Line
H_IL4R CHO-K1 Cell Line	
Anti-IL-4R hIgG1 Antibody(12B5)	Anti-IL4R hIgG4 Antibody(Dupilumab)
Anti-IL4R hIgG4 Reference Antibody (Dupbio)	
Human IL-4R alpha Protein; mFc Tag	
IL-31	
Cynomolgus_IL-31RA OSMR Reporter Baf3 Cell Line	H_IL-31 Reporter Cell Line
Cynomolgus_IL31RA CHO-K1 Cell Line	H_IL31RA CHO-K1 Cell Line
H_IL31RA HEK-293 Cell Line	
Anti-IL31 hIgG1 Antibody(mAb33)	Anti-IL31RA hIgG1 Antibody(NA633)
Anti-IL31RA hIgG2 Antibody(Nemolizumab)	Anti-OSMR hIgG4 Antibody(Vixarelimab)
MRGPRX2	
H_MRGPRX2 Reporter Cell Line	Cynomolgus_MRGPRX2 CHO-K1 Cell Line
Cynomolgus_MRGPRX2 HEK-293 Cell Line	H_MRGPRX2 CHO-K1 Cell Line
H_MRGPRX2 HEK-293 Cell Line	Mouse_MRGPRX2 CHO-K1 Cell Line

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