

Product Sheet

H_FGFR2b Reporter 293 Cell Line

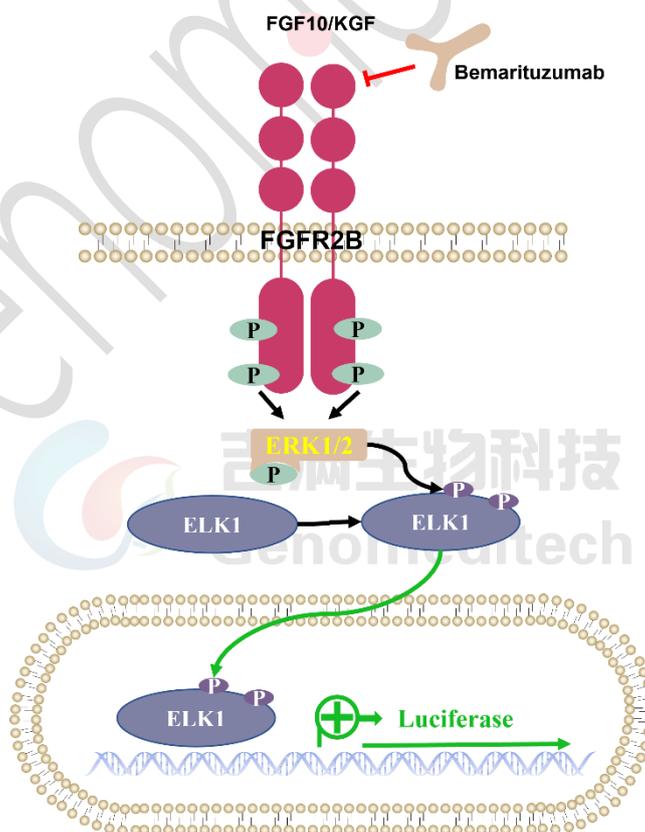
Catalog number: GM-C41521

Version 3.3.1.260209

FGFR2b is an epithelial-specific isoform of the FGFR family produced via alternative splicing of the FGFR2 gene. Its extracellular domain binds FGF7/10 to activate downstream pathways (RAS-MAPK, PI3K-AKT/mTOR, STAT3), regulating cell proliferation, migration, and angiogenesis.

Primarily expressed in epithelial cells, FGFR2b forms a paracrine axis with mesenchymal FGFR2c to support embryonic development and tissue repair. Abnormal activation through gene amplification or ligand overexpression drives tumorigenesis, with 30%-38% of epithelial cancers (gastric, breast, cholangiocarcinoma) showing FGFR2b overexpression linked to poor prognosis and metastasis

H_FGFR2b Reporter 293 Cell Line is a clonal stable HEK-293 cell line constructed using lentiviral technology, constitutive expression of the FGFR2b gene, along with signal-dependent expression of a luciferase reporter gene. When a ligand binds to its receptor, 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 related drugs.



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	DMEM+10% FBS+1% P.S
Growth medium	DMEM+10% FBS+1% P.S+4 µg/mL Blasticidin+125 µg/mL Hygromycin+0.75 µg/mL Puromycin
Note	None
Freezing Medium	90% FBS+10% DMSO
Growth properties	Adherent
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.
DMEM	Gibco/C11995500BT
Fetal Bovine Serum	ExCell/FSP500
Pen/Strep	Thermo/15140-122
Blasticidin	Genomeditech/ GM-040404
Hygromycin	Genomeditech/ GM-040403
Puromycin	Genomeditech/ GM-040401
Human FGF10 Protein	kactus/FGF-HE010
Recombinant Human KGF	Novoprotein/CM88
Anti-FGFR2 hIgG1 Referece Antibody (Bemabio)	Genomeditech/ GM-88057MAB
GMOne-Step 2.0 Luciferase Reporter Gene Assay Kit	Genomeditech/ GM-040513

Figures

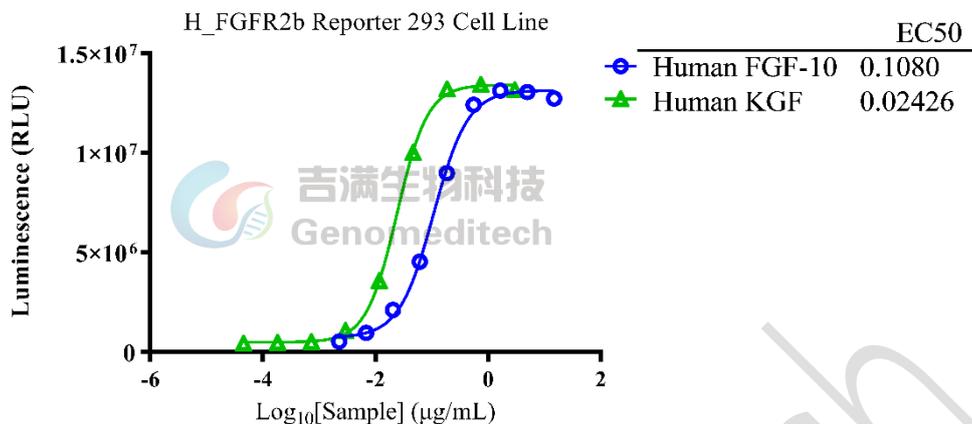


Figure 1 | Response to Human FGF10 and Human KGF. The H_FGFR2b Reporter 293 Cell Line (Cat. GM-C41521) at a concentration of 1.5E4 cells/well (96-well format) was stimulated with serial dilutions of Human FGF10 Protein (kactus/FGF-HE010) and Recombinant Human KGF (Novoprotein/CM88) in assay buffer (DMEM+1% FBS+1% P.S) for 16 hours. The firefly luciferase activity was measured using the Luciferase Reporter Assay Kit (Genomeditech). The maximum induction folds of Human FGF10, Human KGF were approximately [27.2] and [29.9]. Data are shown by drug mass concentration.

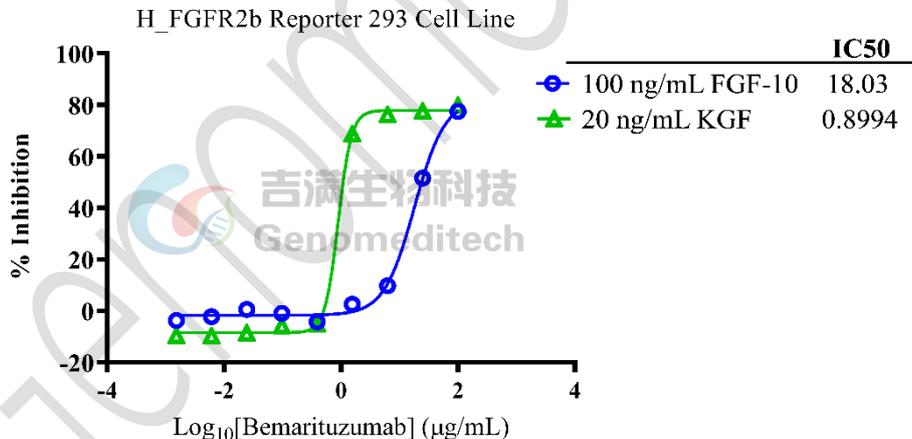


Figure 2 | Response to Anti-FGFR2 hIgG1 Reference Antibody (Bemabio). Serial dilutions of the Anti-FGFR2 hIgG1 Reference Antibody (Bemabio) (Cat. GM-88057MAB) were incubated with 1.5E4 cells/well of the H_FGFR2b Reporter 293 Cell Line (Cat. GM-C41521) in a 96-well plate for 1 hour in assay buffer (DMEM+1% FBS+1% P.S). Subsequently, the Human FGF10 Protein (kactus/FGF-HE010) (10 ng/well) and Recombinant Human KGF (Novoprotein/CM88) (2 ng/well) were added, and the coculture was continued for an additional 16 hours. Firefly luciferase activity was then measured using the Luciferase Reporter Assay Kit (Genomeditech). The results indicated maximum blocking folds of approximately [3.5] and [3.9], respectively. Data are shown by drug mass concentration.

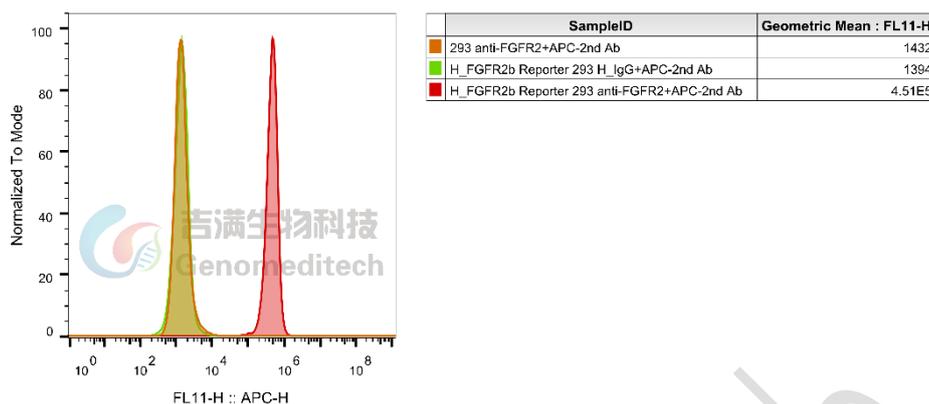


Figure 3 | H_FGFR2b Reporter 293 Cell Line (Cat. GM-C41521) was determined by flow cytometry using Anti-FGFR2 hIgG1 Reference Antibody (Bemabio) (Cat. GM-88057MAB).

Cell Recovery

Recovery Medium: DMEM+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 recovery medium. And dispense into appropriate culture dishes.
- 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: DMEM+10% FBS+1% P.S+4 $\mu\text{g}/\text{mL}$ Blasticidin+125 $\mu\text{g}/\text{mL}$ Hygromycin+0.75 $\mu\text{g}/\text{mL}$ Puromycin

For the first 1 to 2 passages post-resuscitation, use the recovery medium. Once the cells have stabilized, switch to a growth medium.

- Subculturing is necessary when the cell density reaches 80%. It is recommended to perform subculturing at a ratio of 1:3 to 1:4 every 2-3 days. Ensure that the density does not exceed 80%, as overcrowding can lead to reduced viability due to compression.
- Remove and discard culture medium.
- Briefly rinse the cell layer with PBS to remove all traces of serum that contains trypsin inhibitor.
- Add 1.0 mL of 0.25% (w/v) Trypsin-EDTA solution to dish and observe cells under an inverted microscope until cell layer is dispersed (usually within 30 to 60 seconds at 37°C).
- Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal.
- Add 2.0 mL of growth medium to mix well and aspirate cells by gently pipetting.
- After centrifugation, resuspend the pellet and add appropriate aliquots of the cell suspension to new culture vessels.
- Incubate cultures at 37°C.

Subcultivation Ratio: A subcultivation ratio of 1:3 - 1:4 is recommended

Medium Renewal: Every 2 to 3 days

Notes

- Upon initial thawing, a higher number of dead cells is observed, which is a normal phenomenon. Significant improvement is seen after adaptation. Once the cells reach a stable state, the number of dead cells decreases after subculturing and the cell growth rate becomes stable.
- Ensure that the cell density does not exceed 80%, as overcrowding may lead to reduced viability due to compression.

Related Products

CLDN18	
Cynomolgus_CLDN18.2-eGFP CHO-K1 Cell Line	H_CLDN18(isoform2)-eGFP 293 Cell Line
H_CLDN18.1-eGFP HEK-293 Cell Line	H_CLDN18.2 MC38 Cell Line
H_CLDN18.2 MKN45 Cell Line(High Expression)	H_CLDN18.2 MKN45 Cell Line(Low Expression)
H_CLDN18.2 MKN45 Cell Line(Medium Expression)	H_CLDN18.2(isoform2) CHO-K1 Cell Line
H_CLDN18.2-eGFP CT-26 Cell Line	Mouse_CLDN18.2-eGFP CHO-K1 Cell Line
Rat_CLDN18.2-eGFP CHO-K1 Cell Line	Rhesus_CLDN18.2-eGFP CHO-K1 Cell Line
Anti-CLDN18.2 hIgG1 Reference Antibody (IMAB362)	Anti-CLDN18.2 hIgG1 Antibody(LM-102)
Anti-CLDN18.2 hIgG1 Antibody(Zolbetuximab)	
TROP2(TACSTD2)	
Cynomolgus_Trop2 CHO-K1 Cell Line	Cynomolgus_TROP2 HEK-293 Cell Line

H_TROP2 CHO-K1 Cell Line	H_TROP2 CT26 Cell Line
H_TROP2 HEK-293 Cell Line	H_TROP2 LLC1 Cell Line
H_TROP2 MC38 Cell Line	
Anti-H_TROP2 hIgG1 Antibody(Datopotamab)	Anti-TROP2 hIgG1 Antibody(Hu2G10-5)
Anti-Trop2 hIgG1 Reference Antibody (Sacbio)	Anti-Trop2 hIgG1 Reference Antibody(Datbio)
Anti-Trop2-DXD ADC(Dar4)[Datopotamab deruxtecán,Dato-DXD]	Anti-Trop2-SN38 ADC(Dar8)[Sacituzumab govitecan]
Biotinylated Cynomolgus TROP2 Protein; His-Avi Tag	Biotinylated Human TROP2 Protein; His-Avi Tag
Human TROP2 Protein; His Tag	
GUCY2C(GC-C)	
Cynomolgus_GUCY2C HEK-293 Cell Line	H_GUCY2C CHO-K1 Cell Line
H_GUCY2C HEK-293 Cell Line	
Anti-H_GUCY2C hIgG1 Antibody(Indusatumab)	
FGFR2	
Cynomolgus_FGFR2b HEK-293 Cell Line	H_FGFR2b CHO-K1 Cell Line
H_FGFR2b HEK-293 Cell Line	Mouse_FGFR2b HEK-293 Cell Line
Anti-FGFR2 hIgG1 Antibody(hFR2-14_H12-L1)	Anti-FGFR2 hIgG1 Reference Antibody (Bemabio)
Cynomolgus FGFR2(IIIb) D1-D3 Protein; His Tag	Human FGFR2(IIIb) D1-D3 Protein; hFc Tag
Human FGFR2(IIIb) D2-D3 Protein; hFc Tag	Human FGFR2(IIIb) D2-D3 Protein; His Tag
Human FGFR2(IIIc) D1-D3 Protein; His Tag	Mouse FGFR2(IIIb) D2-D3 Protein; His Tag
CD44	
H_CD44s CHO-K1 Cell Line	H_CD44v6 CHO-K1 Cell Line
H_CD44v6 CHO-K1 Cell Line (Medium Expression)	H_CD44v6 HEK-293 Cell Line
Anti-CD44v6 hIgG1 Antibody(bivatuzumab)	
ADC Related Product	
Anti-DXD Mouse IgG1 Antibody (23E21C5)	Anti-DXD Mouse IgG1 Antibody (4A5A12)
Anti-Dxd Mouse IgG2a Antibody (17D6A4)	Anti-Eribulin Mouse IgG2a Antibody (10F8G4)
Anti-MMAE Mouse IgG1 Antibody (11C10E3)	Anti-MMAE Mouse IgG2a Antibody (17A1K11)
Anti-MMAE Mouse IgG2a Antibody (8F6A3)	Anti-SN38 Mouse IgG1 Antibody(59H11C7)
Mouse anti Human IgG1-DXD(Dar8)	Mouse anti Human IgG1-MMAE(Dar4)
Human IgG1 Isotype-DXD (Dar8)	Human IgG1 Isotype-Eribulin (Dar4)
Human IgG1 Isotype-MMAE (Dar4)	
Recombinant DT3C Protein	

License Agreement:

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