PC3-PSMA Overexpressing Cell Line

Cat. No: RG-1475

I. Cell Line Information

Catalog number	RG-1475
Cell line name:	PC3-PSMA Cell Line
Gene ID/Accession #:	N/A
Host cell line	PC3
Cell type:	PC-3 is a cell line initiated from a bone metastasis
Description:	Stable PC3 cell line expressing exogenous PSMA gene
Quantity:	One vial of frozen cells ($5X10^6$ per vial)
Stability:	Stable in culture over a minimum of 10 passages
Application:	Drug screening and biological assays
Freeze medium:	Ham's F12K + 20% FBS + 10% DMSO
Propagation medium:	Ham's F12K + 10% FBS + 1ug/ml Puromycin
Selection marker:	Puromycin
Morphology:	Epithelial
Subculture:	Split the saturated culture at a ratio of 1:4~1:8 every 2~3 days; seed out at about 1-2 x 10^5 cells/mL
Incubation:	37 °C with 5% CO_2
Doubling time:	Approximately 30 hours
Mycoplasma status:	Negative
Biosafety level:	1
Storage:	Liquid nitrogen immediately upon receiving
In Vivo Validation:	Yes

II. Background

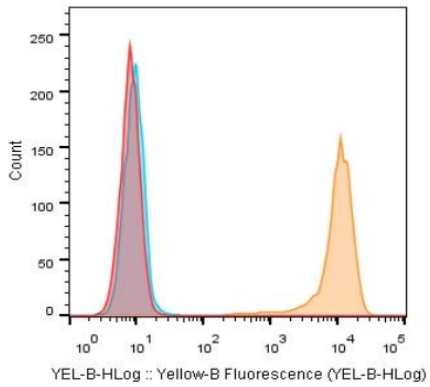
PSMA, encoded by the FOLH1 gene, is a protein with enzymatic activity and is highly expressed in prostate cancer cells, making it a valuable target for diagnosis and treatment. Its expression can vary, and understanding its regulation is important for personalized treatment strategies.

Prostate-specific membrane antigen (PSMA) is a type II membrane protein originally characterized by the murine monoclonal antibody (mAb) 7E11-C5.3 and is expressed in all forms of prostate tissue, including carcinoma. The PSMA protein has a unique 3-part structure: a 19-amino-acid internal portion, a 24-amino-acid transmembrane portion, and a 707-amino-acid external portion. The PSMA gene is located on the short arm of chromosome 11 in a region that is not commonly deleted in prostate cancer.

III. Cell Line Generation

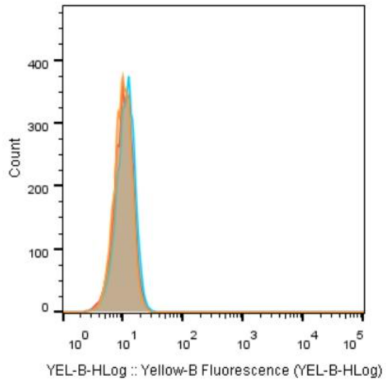
PC3 human PSMA cell line was generated using a lentiviral vector expressing the human PSMA sequence.

IV. Characterization



SampleID	Geometric Mean : YEL-B-HLog
Blank	8.07
ISO	9.32
PE anti-human PSMA	8239

Figure1: Characterization of human PSMA overexpression in PC3 human PSMA stable clones using FACS.



SampleID	Geometric Mean : YEL-B-HLog
Blank	9.83
ISO	11.1
PE anti-human PSMA	10.1

Figure2: Characterization of human PSMA expression in PC3 cells using FACS.

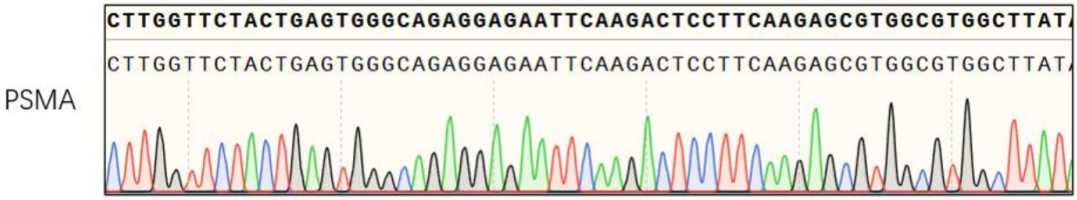


Figure3: Characterization of PC3 human PSMA stable clone using PCR sequencing.

V. Application

Hybridoma or ligand binding screening with FACS.

VI. Cell Resuscitation

1. Prewarm the culture medium (Ham's F12K + 10% FBS + 1ug/ml Puromycin) in a 37°C water bath.
2. Thaw the frozen vial in a 37°C water bath for 1-2 minutes.
3. Transfer the vial to a biosafety cabinet and wipe the surface with 70% ethanol.
4. Unscrew the top of the vial and transfer the cell suspension gently into a sterile centrifuge tube containing 9.0 ml complete culture medium.
5. Spin at ~ 125 x g for 5~7 minutes at room temperature and discard the supernatant without disturbing the pellet.
6. Resuspend the cell pellet with the appropriate volume of complete medium and transfer the cell suspension into a T25 culture flask.
7. Incubate the flask in an incubator at 37°C, 5% CO_2.
8. Split the saturated culture at a ratio of 1:4 ~ 1:8 every 2~3 days; seed out at about 1-2 x 10^5 cells/ml.

VII. Cell Freezing

1. Freshly prepare the freezing medium (Ham's F12K + 20% FBS + 10% DMSO) before use.
2. Keep the freezing medium on ice and label cryovials for later use.
3. Trypsinize and harvest cells to a sterile, conical centrifuge tube during the logarithmic growth period and count the cells.
4. Centrifuge the cells at room temperature at 250 x g for 5 minutes and carefully aspirate off the medium.
5. Resuspend the cells at a density of at least 3 x10^6 cells/ml in the chilled freezing medium.
6. Aliquot 1ml of the cell suspension into each cryovial.
7. Freeze cells in the Cool Cell freezing container overnight in a −80°C freezer.
8. Transfer vials to liquid nitrogen for long-term storage.

400 McCaslin Blvd,Louisville, CO 80027
Phone: +1 (303)-522-8502
Email: info@runtogen.com
Website: www.runtogen.com