

Datasheet for 451Lu-BR-01-0005**451Lu BR Viable Cells****Overview**

Description:	451Lu BR Viable Cells - 451Lu-BR-01-0005
Item No.:	451Lu-BR-01-0005
Size:	5 x 1 million cells
Applications:	Other
Origin:	Human

Product Details

Background:	451Lu BR is a human metastatic melanoma cell line. This cell line is resistant to BRAF and MEK inhibitors. This cell line features the specific V600E (Val600Glu) mutation at codon 600 in the BRAF gene. This mutation causes constitutively active kinase activity and activation of MEK and ERK signaling pathway. This cell line was derived from the same patient as the cell lines, WM164, and 451Lu. 451Lu BR cells produce xenograft tumors when injected into immunocompromised mice.
Synonyms:	Melanoma, patient derived tumor, tumor models, skin cancer, xenograft
Species of Origin:	Human

Target Details

Purity/Specificity:	Cells are sterile, validated by short tandem repeat profiling, and are tested as negative for mycoplasma. It is recommended that cell lines are tested for mycoplasma contamination and short tandem repeat (STR) profiling every 10 passages or each time a frozen seed stock is made. See cell culture protocol for additional details.
Relevant Links:	• Cell Line EULA • Melanoma Cell Culture Protocol

Application Details

Suggested Applications:	Other (Based on references)
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Application Note: The key applications of these cell lines include genetic studies, xenograft production, drug testing, and drug target discovery. These cell line models can be used in various biological assays, and for identifying critical target genes, and cell signaling pathways.

Assay Dilutions: All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

Cell Line Data

Cell Line:	Human Melanoma
Product Type:	Viable Cells
Cell Viability:	Yes
Stage:	BRAF Resistant
BRAF:	V600E
CDK4:	WT
C-Kit:	WT
N-RAS:	WT
PTEN:	ND
Paired:	Yes
Medium:	Tumor Specialized Media with 2% HI-FBS
Sub-culture:	Requires 1 μ M PLX4720. Cells should be maintained between 30 – 95% confluence in tumor specialized medium with 2% FBS containing 1 μ M PLX4720 ; split cultures using 0.25% trypsin/EDTA.
Incubation:	36°C with 5% CO ₂

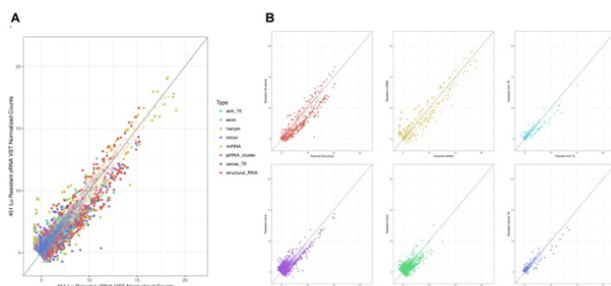
Formulation

Physical State:	Frozen Cell Suspension
Concentration:	1.0 million cells/ml Count By Hemocytometer
Buffer:	None
Preservative:	None
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Cells are frozen with 90% FBS/10% DMSO solution at about 5x10^6 cells/ml. Store vial in liquid nitrogen upon arrival.
Expiration:	Expiration date is two (2) years from date of receipt.

Images

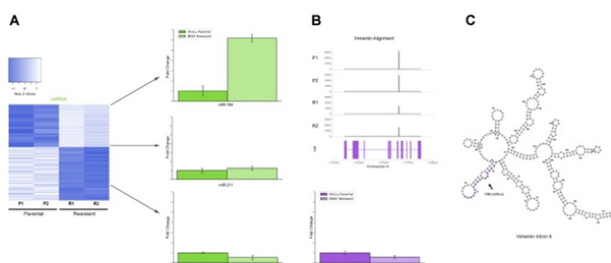


Figure

Scatterplots depicting 451Lu BRAF resistant versus parental RNA: VST normalized counts. (A) Overlay of all subtype scatterplots. (B) RNA subtype specific scatterplots.

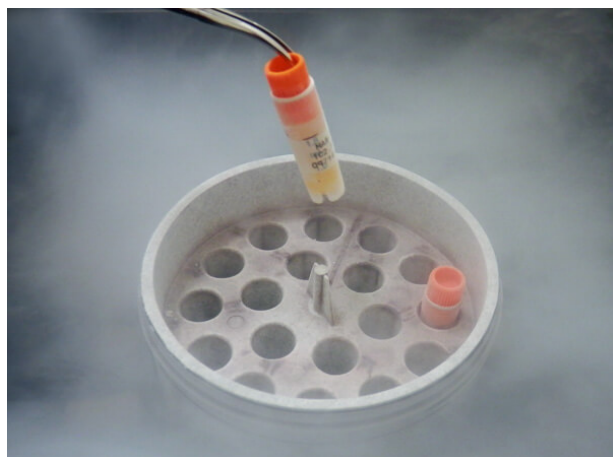
Transparent points represent RNA species with adjusted p-value < 0.05.

Fig 2. PMID: 30349559



Figure

Detailed analysis miRNAs of interest. (A) qPCR representing fold change of miRNAs miR-184, miR-211, and miR-100 in 451Lu BRAF Resistant samples relative to 451Lu parental expression levels across replicates. (B) qPCR representing log fold change of the VIM miRNA in 451Lu BRAF Resistant vs. Parental samples and BAM gene alignment tracks across samples. (C) RNAfold predicted secondary structure of VIM intron 6 with the candidate miRNA highlighted in purple. Fig 4. PMID: 30349559



Flask

Human melanoma tumor cells with known gene mutations, disease stage, STR, and RPPA profiling

References

- O'Neill K et al. TEsma1 Identifies Small RNAs Associated With Targeted Inhibitor Resistance in Melanoma. *Front Genet.* (2018)

Disclaimer

No test method can provide total assurance that the hepatitis B virus, hepatitis C virus, human immunodeficiency virus, or any other infectious agents are absent. Thus, all blood products, including purified proteins derived from human blood sources, should be handled at Biosafety Level 2 as recommended by the CDC/NIH manual entitled Biosafety in Microbiological and Biomedical Laboratories for potentially infectious human serum, blood specimens or proteins derived from same. Source material for the human blood product supplied to your facility has been tested for the detection of HIV antibody, Hepatitis B surface antigen, antibody to Hepatitis C, HIV 1 antigen(s), antibody to HTLV - I/II, and syphilis by FDA guidelines. All units were found to be non-reactive/negative for these tests. All human blood source material is collected in FDA licensed centers and is tested with FDA approved test kits.

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