Product sheet

BV-173 growing culture | 330133

General information

Description	The BV-173 cell line was derived from the peripheral blood of a patient with Philadelphia chromosome (Ph1)+ chronic myeloid leukemia in 1980.
Organism	Human
Tissue	Blood
Disease	Chronic myeloid leukemia

Characteristics

Age	45 years
Gender	Male
Ethnicity	Caucasian
Cell type	Undifferentiated blast cells
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	BV-173 (Cytion catalog number 300133)
Biosafety level	1

Expression / Mutation

Reverse transcriptase	Negative (ELISA)
Ploidy status	t(9, 22) Modal Number: 2n=46
Mutational profile	b2a2 BCR-ABL

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Handling

Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	The utilization of a passaging solution is not necessary when passaging cells that are cultured in suspension. The appropriate procedure is to dilute the cells in accordance with the indicated guidelines.
Doubling time	35 hours
Subculturing	Start new cultures at 1 x 10^5 viable cells/ml. Subculture when the cell concentration has reached 1 x 10^6 cells/ml. Prepare dilutions by transferring an appropriate volume of cell suspension into new flasks containing fresh cell culture medium. Optimal cell growth at 0.5 - 2 x 10^6 cells/ml.
Split ratio	A ratio of 1:3 is recommended
Seeding density	1 x 10^5 cells/ml
Fluid renewal	2 to 3 times per week
Freezing recovery	Allow the cells to recover from the freezing process for at least 48 hours.
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	BV-173 cells are shipped in a deep-frozen state on dry ice. Upon receipt, confirm that the vial remains frozen. For storage, place the cryovial immediately at temperatures below -150 degrees. If you plan to culture the cells immediately, swiftly thaw the vial by shaking it in a 37 degrees water bath with clean water and an antimicrobial agent for 40-60 seconds. Remove the vial once a small ice clump persists, ensuring it remains cold. Proceed with all subsequent steps under aseptic conditions. In a sterile flow hood, disinfect the cryovial with 70% ethanol. Then, gently open the vial and transfer the cell suspension into a 15 ml centrifuge tube pre-filled with 8 ml of room temperature culture medium. Gently mix the cells. For cell separation, centrifuge at 300 x g for 3 minutes and dispose of the supernatant. Skipping centrifugation is optional, although any residual freezing medium should be removed after 24 hours. Resuspend the pellet gently in 10 ml of fresh culture medium and divide between two T25 culture flasks. Follow the subculture protocol for subsequent steps.

Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in a 50 ml centrifuge tube. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Examine cell morphology and confluency using a microscope. Finally, incubate the flasks at 37 degrees Celsius for at least 24 hours.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contamination is rigorously excluded using both PCR-based assays and luminescence-based mycoplasma detection methods. To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.
STR profile	**Amelogenin**: x,x **CSF1PO**: 11,12 **D13S317**: 8, 10 **D16S539**: 11, 13 **D5S818**: 10, 12 **D7S820**: 10, 11 **TH01**: 6, 9.3 **TPOX**: 8, 10 **vWA**: 16 **D3S1358**: 16, 17 **D21S11**: 30, 32 **D18S51**: 12, 16 **Penta E**: 12, 16 **Penta D**: 11 **D8S1179**: 11, 12, 13 **FGA**: 20, 24 **D1S1656**: 14, 16 **D6S1043**: 12, 17 **D2S1338**: 24, 25 **D12S391**: 13 **D19S433**: 18, 21
HLA alleles	**A***: 02:01:01, 30:01:01 **B***: 15:10:01, 18:01:01 **C***: 03:04:02, 12:03:01 **DRB1***: 13:02:01, 16:01:01 **DQA1***: 01:02:01, 01:02:02 **DQB1***: 05:02:01, 06:03:01 **DPB1***: 01:01:01, 02:01:02 **E**: 01:01:01, 01:03