BCRJ Code:	0427
Cell Line:	BCL2 Jurkat
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Peripheral Blood
Cell Type:	T Lymphocyte
Morphology:	Lymphoid-like
Disease:	Leukemia; Acute T Cell
Growth Properties:	Suspension
Sex:	Male
Age/Ethinicity:	14 Year /
Derivation:	The BCL2 Jurkat cell line was derived by transfecting human Jurkat T cells with the pSFFV-neo mammalian expression vector containing the human BCL-2 ORF insert and a neomycin-resistant gene (Addgene # 3349). Stable neomycin (Neo)-resistant single-cell-originated clones were isolated and expanded by selection in medium containing 1 mg/mL G418 for 14 days.
Applications:	This cell line over-expresses BCL-2, and is useful to study cell apoptosis, BCL-2 function and its pathway. 3D cell culture; Immune system disorder research; Immunology
DNA Profile:	D5S818: 9 D13S317: 8, 12 D7S820: 8, 12 D16S539: 11 vWA: 18, 19 TH01: 6, 9.3 Amelogenin: X Y TPOX: 8, 10 CSF1PO: 11, 12
Products:	Neomycin resistance gene; BCL2 over-expressed

Biosafety:	2
Addtional Info:	The BCL2 Jurkat cell line was derived by transfecting human Jurkat T cells with the pSFFV-neo mammalian expression vector containing the human BCL-2 ORF insert and a neomycin-resistant gene (Addgene # 3349). Stable neomycin (Neo)-resistant single-cell-originated clones were isolated and expanded by selection in medium containing 1 mg/mL G418 for 14 days (1). The BCL2 Jurkat cell line produces over-expression of human BCL-2.
Culture Medium:	RPMI-1640 medium modified to contain 2 mM L-glutamine, 4500 mg/L glucose, 10% of fetal bovine serum nd 200 mcg/mL G418.
Subculturing:	An inoculum of 2 x 105 to 3 x 105 cells/mL is recommended. Subculture when cell concentration is 2 x 106 cells/mL.
Subculturing Medium Renewal:	Add fresh medium every 3 to 4 days (depending on cell density)
Subculturing Subcultivation Ratio:	1:2 to 1:10 is recommended
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO2), 5% Temperature: 37°C
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)

Thawing Frozen Cells:	SAFETY PRECAUTION: It is strongly recommended to always wear protective gloves, clothing, and a full-face mask when handling frozen vials. Some vials may leak when submerged in liquid nitrogen, allowing nitrogen to slowly enter the vial. Upon thawing, the conversion of liquid nitrogen back to its gas phase may cause the vial to explode or eject its cap with significant force, creating flying debris. 1. Thaw the vial by gently agitating it in a 37°C water bath. To minimize contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as its contents are thawed and decontaminate it by dipping in or spraying with 70% ethanol. From this point, all operations must be performed under strict aseptic conditions. 3. For cells sensitive to DMSO, it is recommended to remove the cryoprotective agent immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL of complete culture medium and centrifuge at approximately 125 × g for 5 to 7 minutes. 4. Discard the supernatant and resuspend the cell pellet in the recommended complete medium (see specific batch information for the appropriate dilution ratio). 5. Incubate the culture under appropriate atmospheric and temperature conditions (see "Culture Conditions" for this cell line). NOTE: It is important to avoid excessive alkalinity of the medium during cell recovery. To minimize this risk, it is recommended to place the culture vessel containing the growth medium in the incubator for at least 15 minutes before adding the vial contents. This allows the medium to stabilize at its normal pH (7.0 to 7.6).
References:	Yamamoto K, et al. BCL-2 is Phosphorylated and Inactivated by an ASK1/Jun N-Terminal Protein Kinase Pathway normally Activated at G2/M. Mol Cell Biol. Dec;19(12):8469-78. 1999. PubMed: 10567572
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