Data Sheet

BCRJ Code:	0125
Cell Line:	Jurkat, Clone E6-1
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Peripheral Blood
Cell Type:	T Lymphocyte
Morphology:	Lymphoblast
Disease:	Acute T Cell Leukemia
Growth Properties:	Suspension
Sex:	Male
Derivation:	The Jurkat cell line was established from the peripheral blood of a 14 year old boy by Schneider et al., and was originally designated JM.
Applications:	This cell line is a suitable transfection host.
DNA Profile:	Amelogenin: X,Y CSF1PO: 11,12 D13S317: 8,12 D16S539: 11 D5S818: 9 D7S820: 8,12 THO1: 6,9.3 TPOX: 8,10 vWA: 18
Products:	Interleukin 2 (IL-2), human alpha interferon
Biosafety:	1
Addtional Info:	Clone E6-1 cells produce large amounts of IL-2 after stimulation with phorbol esters and either lectins or monoclonal antibodies against the T3 antigen (both types of stimulants are needed to induce IL-2 production.

Culture Medium:	RPMI 1640 medium with 2 mM L-glutamine, 4.5 g/L glucosen and 10% of heat-inactivated fetal bovine serum.
Subculturing:	Cultures can be maintained by the addition of fresh medium or replacement of medium. Alternatively, cultures can be established by centrifugation with subsequent resuspension at 1 x 10e5 viable cells/mL. NOTE: Do not allow the cell density to exceed 3 X 10e6 cells/mL.
Subculturing Medium Renewal:	2 to 3 days
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:	J. Exp. Med. 152: 1709-19, 1980; J. Immunol. 133: 123-128, 1984. Berninghausen O, Leippe M. Necrosis versus apoptosis as the mechanism of target cell death induced by Entamoeba histolytica. Infect. Immun. 65: 3615-3621, 1997. PubMed: 9284127 Churchill MJ, et al. The rev-responsive element negatively regulates human immunodeficiency virus type 1 env mRNA expression in primate cells. J. Virol. 70: 5786-5790, 1996. PubMed: 8709194 Kolanus W, et al. alphaLbeta2 integrin/LFA-1 binding to ICAM-1 induced by cytohesin-1 a cytoplasmic regulatory molecule. Cell 86: 233-242, 1996. PubMed: 8706128
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