Data Sheet

BCRJ Code:	0305
Cell Line:	Kasumi-1
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Peripheral Blood
Cell Type:	Myeloblast
Morphology:	Myeloblast
Disease:	Acute Myeloblastic Leukemia
Growth Properties:	Suspension
Sex:	Male
Age/Ethinicity:	7 Year / Japanese
Derivation:	The cell line was established from the peripheral blood of an acute myeloid leukemia (AML) patient.
DNA Profile:	D5S818: 9,11 D13S317: 11,13 D7S820: 8,11 D16S539: 9,12 vWA: 14 THO1: 6,9 Amelogenin: X TPOX: 8,9 CSF1PO: 10,12
Biosafety:	1

Addtional Info:	This is a leukemic cell line with an 8;21 chromosome translocation. This translocation juxtaposes the AML1 with ETO (or MTG8) gene, giving rise to the fusion gene AML1-ETO (also known as AML1-MTG or RUNX1-CBF2T1), hence the cells produce chimeric AML1-ETO protein. This protein down-regulates CEBPA mRNA, protein and DNA binding activity, which is crucial for the differentiation of granulocytes. The cells are positive for myeloperoxidase showing a morphology of myeloid maturation. In proliferation assay the cells in culture showed response to interleukin-3 (IL-3), IL-6, granulocyte colony-stimulating factor (G-CSF), and granulocytemacrophage CSF (GM-CSF), but not to IL-1 or IL-5. Neither granulocytic nor eosinophilic maturation was observed in the in vitro liquid culture by the addition of dimethyl sulfoxide, G-CSF, or IL-5, respectively. Induction of macrophagelike cells was seen by the addition of phorbol ester. Proliferation is inhibited by 1,25S-(OH)2-16,23-diene-26-F3-10-nor D3.
Culture Medium:	RPMI-1640 medium modified to contain 2 mM L-glutamine, 4500 mg/L glucose and 10% of 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 3 x 10e5 viable cells/mL. Maintain cell density between 3 x 10e5 and 3 x 10e6 viable cells/mL.
Subculturing Medium Renewal:	Every 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: Is highly recommend that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris. 1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the Oring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions. 3. For cells that are sensitive to DMSO is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes. 4.Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). 5. Incubate the culture in a appropriate atmosphere and temperature (see "Culture Conditions" for this cell line). NOTE: It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).
References:	Tashiro S, et al. Establishment of a human acute myeloid leukemia cell line (Kasumi-1) with 8;21 chromosome translocation. Blood 77: 2031-2036, 1991.
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