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: 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:	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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