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| **BCRJ Code:** | 0292 |
| **Cell Line:** | K1 |
| **Species:** | Homo sapiens |
| **Vulgar Name:** | Human |
| **Tissue:** | Thyroid |
| **Disease:** | Carcinoma |
| **Growth Properties:** | Adherent |
| **Sex:** | Male |
| **Derivation:** | Derived from a primary papillary thyroid carcinoma. Retains thyroid follicular cell differentiation e.g. thyroglobulin synthesis |
| **DNA Profile:** | Amelogenin: X,Y CSF1PO: 11,12 D13S317: 11,14 D16S539: 11,12 D5S818: 10,11 D7S820: 11 THO1: 6,9 TPOX: 8 vWA: 17,18 |
| **Products:** | Expresses wild-type p53 tumour suppresser gene |
| **Biosafety:** | 1 |
| **Addtional Info:** | Expresses wild-type p53 tumour suppresser gene. It has been reported (Ribeiro et al., 2008 Pubmed: 19087340; Schweppe et al., 2008 Pubmed: 18713817) that K1 cells have their origin in the thyroid papillary carcinoma cell line GLAG-66 (Antonini et al 1993 Pubmed: 8330267) |
| **Culture Medium:** | DMEM:Ham's F12:MCDB 105 (2:1:1) + 2mM L-Glutamine + 10% Foetal Bovine Serum (FBS). |

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| **Subculturing:** | Split sub-confluent cultures (70-80%). Remove and discard culture medium. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum which contains trypsin inhibitor. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Seeding at 2-4 x 10,000 cells/cm² into new culture vessels. Incubate cultures at 37°C. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010. |
| **Subculturing Medium Renewal:** | 2 to 3 times per week |
| **Culture Conditions:** | Atmosphere: air, 95%; carbon dioxide (CO2), 5% Temperature: 37°C |
| **Cryopreservation:** | 95% FBS + 5% DMSO (Dimethyl sulfoxide) |

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| **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.<br>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).<br>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.<br>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.<br>4. Discard the supernatant and resuspend the cell pellet in the recommended complete medium (see specific batch information for the appropriate dilution ratio).<br>5. Incubate the culture under appropriate atmospheric and temperature conditions (see "Culture Conditions" for this cell line).<br><br>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:** | Ribeiro et al., 2008 PMID: 19087340 Schweppe et al., 2008 PMID: 18713817 that K1 cells have their origin in the thyroid papillary carcinoma cell line GLAG-66 (Antonini et al 1993 PMID: 8330267) Wyllie FS, Lemoine NR, Barton CM, Dawson T, Bond J, Wynford-Thomas D. 1993 Direct growth stimulation of normal human epithelial cells by mutant p53. Mol Carcinog: 7(2):83-8 |
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| **Cellosaurus:** | CVCL_2537 |