Data Sheet

BCRJ Code:	0418
Cell Line:	G-401 [G401]
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Kidney
Cell Type:	Epithelial
Morphology:	Epithelial
Disease:	Rhabdoid Tumor
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	3 months Year / White
Derivation:	G-401 was deposited as a cell line derived from a Wilms' tumor.
Applications:	3D cell culture
DNA Profile:	Amelogenin: X,Y CSF1PO: 11,13 D13S317: 9,14 D16S539: 12 D5S818: 13 D7S820: 11,14 TH01: 8,9.3 TPOX: 8,11 vWA: 16 D3S1358: 16,18 D21S11: 31,32.2,33.2 D18S51: 14 Penta_E: 7 Penta_D: 10,11 D8S1179: 13,14 FGA: 24,26,27 D19S433: 13,14 D2S1338: 18,24
Tumor Formation::	Yes; Yes, forms colonies in soft agar
Products:	Genes expressed: nephroblast growth factor (NB-GF) Isoenzymes: G6PD, B
Biosafety:	1

Addtional Info:	G-401 was deposited as a cell line derived from a Wilms' tumor. Due to a change in the classification of such tumors, the cell line was examined by Garvin et al. and found to be more appropriately classified as derived from a rhabdoid tumor of the kidney.
Culture Medium:	McCoy's 5a Medium Modified and fetal bovine serum to a final concentration of 10%.
Subculturing:	Remove medium, and rinse with 0.25% trypsin, 0.53 mM EDTA solution. Remove the solution and add an additional 1 to 2 mL of trypsin-EDTA solution. Allow the flask to sit at room temperature (or at 37°C) until the cells detach. Add fresh culture medium, aspirate and dispense into new culture flasks.
Subculturing Medium Renewal:	2 to 3 times per week
Subculturing Subcultivation Ratio:	1:2 to 1:6 is recommended
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO_2), 5%
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:	Weissman BE, et al. Introduction of a normal human chromosome 11 into a Wilms' tumor cell line controls its tumorigenic expression. Science 236: 175-176, 1987. PubMed: 3031816 Burrow CR, Wilson PD. A putative Wilms tumor-secreted growth factor activity required for primary culture of human nephroblasts. Proc. Natl. Acad. Sci. USA 90: 6066-6070, 1993. PubMed: 8392186 Karnieli E, et al. The IGF-1 receptor gene promoter is a molecular target for the Ewing's Sarcoma=Wilms' Tumor 1 fusion protein. J. Biol. Chem. 271: 19304-19309, 1996. PubMed: 8702614 Garvin AJ, et al. The G401 cell line, utilized for studies of chromosomal changes in Wilms' tumor, is derived from a rhabdoid tumor of the kidney. Am. J. Pathol. 142: 375-380, 1993. PubMed: 8382007
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