Data Sheet

BCRJ Code:	0326
Cell Line:	CAL 27
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Tongue
Cell Type:	Epithelial
Morphology:	Epithelial
Disease:	Squamous Cell Carcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	56 Year / Caucasian
Derivation:	Cal 27 was established in 1982 by J. Gioanni (Centre Antoine Lacassagne, Nice Cedex, France) from tissue taken prior to treatment from a 56 year old Caucasian male with a lesion of the middle of the tongue.
Tumor Formation::	Yes, solid tumors developed within 6 weeks in nude mice inoculated with 2 x 106 cells subcutaneously
Biosafety:	1

Addtional Info:	CAL 27 cells are epithelial, polygonal with a highly granular cytoplasm. Immunocytochemical studies show strong positive staining with anti keratin antibodies. The cells do not grow well in semi-solid medium. Marked inhibition of thymidine incorporation was observed in the presence of VP16 (etoposide), CCNU (1-[2-chloroethyl]-3-cyclohexyl-1-nitrosourea), VM26 (teniposide), ADM (adriamycin), CPA (cyclophosphamide), and MTX (methotrexate). CAL 27 cells were resistant to treatment with VDS (vindesine sulfate), CDP (cis-platinum) or ACTD (actinomycin D).
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) modified to contain 4 mM L-glutamine, 4500 mg/L glucose and fetal bovine serum to a final concentration of 10%.
Subculturing:	Remove spent medium, rinse with PBS without calcium and magnesium. Add fresh trypsin and let the culture sit at room temperature (or at 37°C) until the cells detach. Add fresh medium, aspirate and dispense into new flasks. Population Doubling Time: 35 hrs 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:	Every 2 to 3 days
Subculturing Subcultivation Ratio:	1:6 is recommended
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO_2), 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:	Gioanni J, et al. Two new human tumor cell lines derived from squamous cell carcinomas of the tongue: establishment, characterization and response to cytotoxic treatment. Eur. J. Cancer Clin. Oncol. 24: 1445-1455, 1988. PubMed: 3181269
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