Data Sheet

BCRJ Code:	0224
Cell Line:	SIRC [STATENS SERUMINSTITUT RABBIT CORNEA]
Species:	Oryctolagus cuniculus
Vulgar Name:	Rabbit
Tissue:	Cornea
Morphology:	Fibroblast
Disease:	Normal
Growth Properties:	Adherent
Derivation:	Derived from the cornea of a normal rabbit. The line is suitable for primary isolation of rubella virus in addition to propagation and assay.
Applications:	This cell line is suitable for primary isolation of rubella virus. The early appearance of distinct cytopathic changes makes this cell line highly suitable for both the propagation and quantitation of rubella virus.
Virus Succeptility::	Rubella virus , Rubella virus
Virus Resistance::	POLIOVIRUS-1; COXSACKIEVIRUS A-9 AND B-5
Biosafety:	1
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) with 1% non-essential amino acids, 2 mM L-glutamine, 1 mM sodium pyruvate, 1.0 g/L glucose with 10% of fetal bovine serum.

Subculturing:	Volumes used in this protocol are for 75 cm2 flask; proportionally reduce or increase amount of dissociation medium for culture vessels of other sizes. 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). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Add appropriate aliquots of the cell suspension to 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 Subcultivation Ratio:	1:4 to 1:8 is recommended
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:	Leerhoy J. Cytopathic effect of rubella virus in a rabbit-cornea cell line. Science 149: 633-634, 1965. PubMed: 14331182 Phillips CA, et al. Isolation, propagation and neutralization of rubella virus in cultures of rabbit cornea (SIRC) cells. Proc. Soc. Exp. Biol. Med. 122: 783-786, 1966. PubMed: 5918951 Rhim JS, et al. Plaque assays of rubella virus in cultures of rabbit cornea (SIRC) cells. Proc. Soc. Exp. Biol. Med. 125: 1271-1274, 1967. PubMed: 6042441 Farris AD, et al. Conserved features of Y RNAs revealed by automated phylogenetic secondary structure analysis. Nucleic Acids Res. 27: 1070-1078, 1999. PubMed: 9927741
Depositors:	Jose Paulo Leite, Instituto Oswaldo Cruz, Rio de Janeiro.
Cellosaurus:	CVCL_2724