

Data Sheet

PAGE 1/5

BCRJ Code:	0071
Cell Line:	COS-7
Species:	Cercopithecus aethiops
Vulgar Name:	Monkey; African Green Monkey
Tissue:	Kidney
Cell Type:	Sv40 Transformed
Morphology:	Fibroblast
Growth Properties:	Adherent
Age/Ethnicity:	ADULT /
Applications:	This is an African green monkey kidney fibroblast-like cell line suitable for transfection by vectors requiring expression of SV40 T antigen.
Products:	T-antigen
Biosafety:	2
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) modified to contain 4 mM L-glutamine, 4500 mg/L glucose, 1 mM sodium pyruvate and fetal bovine serum to a final concentration of 10%.

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. T-75 flasks are recommended for subculturing this product. Remove and discard culture medium. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum that 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**Medium Renewal:**

2 to 3 times per week

Subculturing**Subcultivation Ratio:**

1:4 to 1:8

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:

Gluzman Y. SV40-transformed simian cells support the replication of early SV40 mutants. *Cell* 23: 175-182, 1981. PubMed: 6260373

Fernandez LM, Puett D. Lys583 in the third extracellular loop of the lutropin/choriogonadotropin receptor is critical for signaling. *J. Biol. Chem.* 271: 925-930, 1996. PubMed: 8557706

Maestrini E, et al. A family of transmembrane proteins with homology to the MET-hepatocyte growth factor receptor. *Proc. Natl. Acad. Sci. USA* 93: 674-678, 1996. PubMed: 8570614

Campbell M, et al. The simian foamy virus type 1 transcriptional transactivator (Tas) binds and activates an enhancer element in the gag gene. *J. Virol.* 70: 6847-6855, 1996. PubMed: 8794326

Gonzalez Armas JC, et al. DNA immunization confers protection against murine cytomegalovirus infection. *J. Virol.* 70: 7921-7928, 1996. PubMed: 8892915

Jang SI, et al. Activator protein 1 activity is involved in the regulation of the cell type-specific expression from the proximal promoter of the human profilaggrin gene. *J. Biol. Chem.* 271: 24105-24114, 1996. PubMed: 8798649

Dittrich E, et al. A di-leucine motif and an upstream serine in the interleukin-6 (IL-6) signal transducer gp130 mediate ligand-induced endocytosis and down-regulation of the IL-6 receptor. *J. Biol. Chem.* 271: 5487-5494, 1996. PubMed: 8621406

Lee JH, et al. The proximal promoter of the human transglutaminase 3 gene. *J. Biol. Chem.* 271: 4561-4568, 1996. PubMed: 8626812

Chen Y, et al. Demonstration of binding of dengue virus envelope protein to target cells. *J. Virol.* 70: 8765-8772, 1996. PubMed: 8971005

Russell DW, Miller AD. Foamy virus vectors. *J. Virol.* 70: 217-222, 1996. PubMed: 8523528

Wright DA, et al. Association of human fas (CD95) with a ubiquitin-conjugating enzyme (UBC-FAP). *J. Biol. Chem.* 271: 31037-31043, 1996. PubMed: 8940097

Zhang J, et al. Dynamin and beta-arrestin reveal distinct mechanisms for G protein-coupled receptor internalization. *J. Biol. Chem.* 271: 18302-18305, 1996. PubMed: 8702465

Ozcelebi F, et al. Phosphorylation of cholecystokinin receptors expressed on chinese hamster ovary cells. *J. Biol. Chem.* 271: 3750-3755, 1996. PubMed: 8631990

Gibson S, et al. Functional LCK is required for optimal CD28-mediated activation of the TEC family tyrosine kinase EMT/ITK. *J. Biol. Chem.* 271: 7079-7083, 1996. PubMed: 8636141

Shaul PW, et al. Acylation targets endothelial nitric-oxide synthase to plasmalemmal caveolae. *J. Biol. Chem.* 271: 6518-6522, 1996. PubMed: 8626455

Ladner RD, et al. Identification of a consensus cyclin-dependent kinase phosphorylation site unique to the nuclear form of human deoxyuridine triphosphate nucleotidohydrolase. *J. Biol. Chem.* 271: 7752-7757, 1996. PubMed: 8631817

Wu X, et al. Demonstration of a physical interaction between microsomal triglyceride transfer protein and apolipoprotein B during the assembly of ApoB-containing lipoproteins. *J. Biol. Chem.* 271: 10277-10281, 1996. PubMed: 8626595

Hawes BE, et al. Phosphatidylinositol 3-kinase is an early intermediate in the G beta gamma-mediated mitogen-activated protein kinase signaling pathway. *J. Biol. Chem.* 271: 12133-12136, 1996. PubMed: 8647803

Arai H, Charo IF. Differential regulation of G-protein-mediated signaling by chemokine receptors. *J. Biol. Chem.* 271: 21814-21819, 1996. PubMed: 8702980

Hsieh CM, et al. APEG-1, a novel gene preferentially expressed in aortic smooth muscle cells, is down-regulated by vascular injury. *J. Biol. Chem.* 271: 17354-17359, 1996. PubMed: 8663449

Holtmann MH, et al. Multiple extracellular loop domains contribute critical determinants for agonist binding and activation of the secretin receptor. *J. Biol. Chem.* 271: 14944-14949, 1996. PubMed: 8663161

Depositors: Banco de Células do Rio de Janeiro

Cellosaurus: [CVCL_0224](#)