BCRJ Code:	0332
Cell Line:	LoVo
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Colon; derived from metastatic site: left supraclavicular region
Disease:	Dukes' type C, grade IV, colorectal adenocarcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethinicity:	56 Year /
Derivation:	LoVo was initiated in 1971 from a fragment of a metastatic tumor nodule in the left supraclavicular region of a 56-year-old Caucasian male patient with a histologically proven diagnosis of adenocarcinoma of the colon.
Applications:	This cell line is a suitable transfection host.
Tumor Formation::	Yes, in nude mice.
Products:	Carcinoembryonic antigen (CEA) 908 ng/10 exp6 cells/10 days
Biosafety:	1
Culture Medium:	F-12K Medium (Kaighn's Modification of Ham's F-12 Medium) contains 2 mM L-glutamine and 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 that contains trypsin inhibitor. Add 1.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until the 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. Transfer cell suspension to centrifuge tube and spin at approximately 125 x g for 5 to 10 minutes. Discard supernatant and resuspend cells in fresh growth medium. Add appropriate aliquots of cell suspension to new culture vessels. Place culture vessels in incubators 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:	1:3 to 1:10
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO2), 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:	Drewinko B, et al. Further biologic characteristics of a human carcinoembryonic antigen-producing colon carcinoma cell line. J. Natl. Cancer Inst. 61: 75-83, 1978. PubMed: 276641 Drewinko B, Yand LY. Restriction of CEA synthesis to the stationary phase of growth of cultured human colon carcinoma cells. Exp. Cell Res. 101: 414-416, 1976. PubMed: 964319 Drewinko B, et al. Establishment of a human carcinoembryonic antigen-producing colon adenocarcinoma cell line. Cancer Res. 36: 467-475, 1976. PubMed: 1260746 Trainer DL, et al. Biological characterization and oncogene expression in human colorectal carcinoma cell lines. Int. J. Cancer 41: 287-296, 1988. PubMed: 3338874 Keesee SK, et al. Nuclear matrix proteins in human colon cancer. Proc. Natl. Acad. Sci. USA 91: 1913-1916, 1994. PubMed: 8127905 Drewinko B, et al. Response of exponentially growing, stationary-phase, and synchronized cultured human colon carcinoma cells to treatment with nitrosourea derivatives. Cancer Res. 39: 2630-2636, 1979. PubMed: 445465 Miranda L, et al. Isolation of the human PC6 gene encoding the putative host protease for HIV-1 gp160 processing in CD4+ T lymphocytes. Proc. Natl. Acad. Sci. USA 93: 7695-7700, 1996. PubMed: 8755538
Depositors:	Lidia Moreira Lima - Universidade Federal Do Rio De Janeiro
ATCC:	CCL-229