BCRJ Code:	0117
Cell Line:	IEC-6
Species:	Rattus norvegicus
Vulgar Name:	Rat
Tissue:	Small Intestine/Epithelium
Morphology:	Epithelial
Disease:	Normal
Growth Properties:	Adherent
Sex:	Male
Applications:	This cell line is a suitable transfection host.
Products:	COLLAGEN; FIBRONECTIN
Biosafety:	1
Addtional Info:	Growth is inhibited by cortisol. Cells possess cell surface antigens specific for intestinal epithelial cells in vivo
Culture Medium:	Dulbecco's modified Eagle's medium with 2 mM L-glutamine, 4.5 g/L glucose, 0.1 Unit/mL bovine insulin and 5% of fetal bovine serum.
Subculturing:	Remove medium, and rinse with PBS without calcium and magnesium. 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. 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:	Twice per week
Subculturing Subcultivation Ratio:	1:3 to 1:6
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:	Quaroni A, et al. Fibronectin synthesis by epithelial crypt cells of rat small intestine. Proc. Natl. Acad. Sci. USA 75: 5548-5552, 1978. PubMed: 103096 Quaroni A, et al. Epithelioid cell cultures from rat small intestine. Characterization by morphologic and immunologic criteria. J. Cell Biol. 80: 248-265, 1979. PubMed: 88453 Quaroni A, et al. Keratin expression in rat intestinal crypt and villus cells. J. Biol. Chem. 266: 11923-11931, 1991. PubMed: 1711043 Dignass AU, Podolsky DK. Interleukin 2 modulates intestinal epithelial cell function in vitro. Exp. Cell Res. 225: 422-429, 1996. PubMed: 8660931 Weiser MM, Quaroni A. A vitamin D-related inhibition of growth of an epithelioid cell line derived from rat small intestine. Biochem. Biophys. Res. Commun. 90: 788-793, 1979. PubMed: 508345 Jakobs ES, et al. Expression of sodium-linked nucleoside transport activity in monolayer cultures of IEC-6 intestinal epithelial cells. J. Biol. Chem. 265: 22210-22216, 1990. PubMed: 2266122 Conteas CN, Majumdar AP. The effects of gastrin, epidermal growth factor, and somatostatin on DNA synthesis in a small intestinal crypt cell line (IEC-6). Proc. Soc. Exp. Biol. Med. 184: 307-311, 1987. PubMed: 2881310
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ATCC:	CRL-1592