

Title (en)
HUMAN ESOPHAGEAL EPITHELIAL CELL LINES

Publication
EP 0494225 A4 19930428 (EN)

Application
EP 90914817 A 19900927

Priority
US 41280289 A 19890927

Abstract (en)
[origin: WO9105062A1] Human esophageal epithelial cells having replicative capacity in cell culture that is enhanced compared to normal cells and are unable to produce tumors is disclosed. Normal human esophagus tissue from two autopsy specimens was explanted in serum-free medium. Epithelial outgrowths were subcultured, then transfected by strontium phosphate coprecipitation with plasmid pRSV-T consisting of the RSV-LTR promoter and the SV40 large T-antigen gene. The transfected cells formed multilayered colonies within 3-4 weeks, which were transferred and developed into cell strains (HE-451 and HE-457). Both strains grew exponentially for 8-10 weeks, then senesced. After a "crisis" of 6-8 months, isolated colonies developed into two lines, HET-1A from HE-457 and HET-2A from HE-451. These have now undergone 143 and 122 population doublings, respectively. Both have epithelial morphology, stain for cytokeratin and the SV40 T-antigen by immunofluorescence, and have remained nontumorigenic in athymic mice for 12 months. The immortalized esophageal lines in serum-free system are useful for investigating the action of putative esophageal carcinogens.

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C12Q 1/02; **C12N 5/06**; **C12N 15/06**

IPC 8 full level
C12N 5/10 (2006.01); **C12Q 1/02** (2006.01); **C12Q 1/18** (2006.01); **G01N 33/50** (2006.01); **C12R 1/91** (2006.01)

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G01N 33/5017 (2013.01)

Citation (search report)
• [AD] WO 8903994 A1 19890505 - US ARMY [US]
• [X] CANCER RESEARCH vol. 45, no. 2, February 1985, PHILADELPHIA pages 841 - 846 GRACE M.P. ET AL 'Keratin expression in normal esophageal epithelium and squamous cell carcinoma of the esophagus'
• [XP] IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY vol. 26, no. 3, March 1990, GAITHERSBURG, MD page 23A STONER G.D. ET AL 'Immortalized human esophageal epithelial cell lines for studies of carcinogen-induced cell transformation'
• [XP] PROCEEDINGS OF THE EIGHTY-FIRST ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH vol. 31, no. 0, March 1990, WASHINGTON page 136 LIGHT, B. ET AL 'Hst-1 induces tumorigenicity in SV40 T antigen immortalized non-tumorigenic, human esophageal epithelial cells'
• See references of WO 9105062A1

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