Product sheet

NCI-N87 Cells | 305057

General information

Description	NCI-N87, also known as N87, is a human gastric cancer cell line and is widely utilized in cancer research, particularly gastric carcinoma studies. NCI-N87 cells contribute to our understanding of the digestion model of the gastric mucosa and play a role in the development of gastroretentive delivery systems. In pharmacological contexts, NCI-N87 cells have been used to explore the role of gentamicin as an anticancer agent. The gastric adenocarcinoma cell line NCI-N87 is tumorigenic and expresses the oncogenes myc and erb-B2, and are therefore instrumental in xenograft model studies. This cell line's inflammatory properties and response to agents like gentamicin can be assayed, as can its potential involvement in epithelial barrier integrity and function using intestinal permeability assays. The cells are known to express surface glycoproteins such as carcinoembryonic antigen (CEA) and TAG 72, but are negative for L-dopa decarboxylase (DDC). The cells show minimal positivity for vasoactive intestinal peptide (VIP) receptors and lack gastrin receptors, and they express receptors for muscarinic cholinergic agents. No amplification or rearrangements were observed in N-myc, L-myc, myb, and EGF receptor genes in these cells. In summary, the gastric epithelium cell line NCI-N87 serves as a model for gastric cancer research, epithelial cell behavior, drug delivery systems, and the metabolic pathways of nutritionally relevant compounds.
Organism	Human
Tissue	Stomach
Disease	Gastric tubular adenocarcinoma
Metastatic site	Liver
Synonyms	NCI-N87, NCI N87, N-87, NCI-H87, H87, H-87, NCIN87

Characteristics

Gender	Male
Ethnicity	African
Morphology	Epithelial
Growth properties	Adherent

Identifiers / Biosafety / Citation

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Citation	N87 (Cytion catalog number 305057)
Biosafety level	1

Expression / Mutation

Tumorigenic	Yes

Handling

Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	Accutase
Subculturing	Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium.
Split ratio	1:2 to 1:4
Fluid renewal	2 to 3 times per week
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	N87 cells are shipped in a deep-frozen state on dry ice. Upon receipt, confirm that the vial remains frozen. For storage, place the cryovial immediately at temperatures below -150 degrees. If you plan to culture the cells immediately, swiftly thaw the vial by shaking it in a 37 degrees water bath with clean water and an antimicrobial agent for 40-60 seconds. Remove the vial once a small ice clump persists, ensuring it remains cold. Proceed with all subsequent steps under aseptic conditions. In a sterile flow hood, disinfect the cryovial with 70% ethanol. Then, gently open the vial and transfer the cell suspension into a 15 ml centrifuge tube pre-filled with 8 ml of room temperature culture medium. Gently mix the cells. For cell separation, centrifuge at 300 x g for 3 minutes and dispose of the supernatant. Skipping centrifugation is optional, although any residual freezing medium should be removed after 24 hours. Resuspend the pellet gently in 10 ml of fresh culture medium and divide between two T25 culture flasks. Follow the subculture protocol for subsequent steps.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contamination is rigorously excluded using both PCR-based assays and luminescence-based mycoplasma detection methods. To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.
STR profile	**Amelogenin**: x,y **CSF1PO**: 8,12 **D13S317**: 8,11 **D16S539**: 9,13 **D5S818**: 12,13 **D7S820**: 10,11 **TH01**: 9 **TPOX**: 9,11 **vWA**: 15,16 **D3S1358**: 14 **D21S11**: 30 **D18S51**: 17 **Penta E**: 5 **Penta D**: 12 **D8S1179**: 14 **FGA**: 20,21 **D6S1043**: 12 **D2S1338**: 23,24 **D12S391**: 16,21 **D19S433**: 14,14.2