Product sheet

NPC/HK1 Cells | 305531

General information

Description	NPC/HK1 (also designated HK-1 or HK1) is a human nasopharyngeal carcinoma (NPC) cell line established from the nasopharynx of a 58-year-old Chinese male patient. NPC/HK1 grows as an adherent epithelial monolayer with a doubling time of approximately 28 ± 2 hours. NPC/HK1 is a widely used model for undifferentiated NPC, a malignancy strongly associated with Epstein-Barr virus (EBV) infection and particularly prevalent in Southeast Asian populations. The line was established in Hong Kong and provides an EBV-negative or low-EBV model that complements EBV-positive NPC lines for studying EBV-independent aspects of NPC biology. NPC/HK1 is applicable in studies of nasopharyngeal carcinoma biology, epithelial-to-mesenchymal transition, invasion and metastasis, EBV biology (infection and latency comparisons with EBV-positive lines), EGFR pathway signalling, and chemotherapy/radiotherapy sensitivity. The line is used in xenograft models in immunocompromised hosts and as part of NPC cell line panels for comparative pharmacological and molecular studies. Its Chinese male donor origin reflects the population at highest risk for NPC and is relevant for studies of EBV epidemiology and NPC immunogenomics.
Organism	Human
Tissue	Pharynx, nasopharynx
Disease	Nasopharyngeal carcinoma
Applications	Nasopharyngeal carcinoma research; EBV biology; EMT and invasion studies; EGFR pathway; chemotherapy/radiotherapy sensitivity; NPC xenograft models; NPC comparative cell line panels
Synonyms	HK1, HK-1

Characteristics

Age	58 years
Gender	Male
Ethnicity	Chinese
Morphology	Epithelial-like
Cell type	Epithelial cells
Growth properties	Adherent

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Regulatory Data

Citation	NPC/HK1 (Cytion catalog number 305531)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_7084

Biomolecular Data

Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
Doubling time	28 +- 2 hours
Subculturing	Remove medium, wash with PBS without calcium and magnesium, cover with Accutase, incubate 8–10 min at RT, resuspend in medium, centrifuge 300×g 3 min, discard supernatant, reseed in fresh medium.
Split ratio	1 to 5
Seeding density	1 to 3 × 10^4 cells/cm^2
Fluid renewal	Every 2 to 3 days
Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

Thawing and Culturing Cells	1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. 2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required. 3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains. 4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening. 5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently. 6. Centrifuge the mixture at 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium. 7. Follow the procedure described under Post-Thaw Recovery
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
Shipping Conditions	Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.
Storage Conditions	For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Quality Control & Molecular Analysis