Product sheet

HSF (SV40) Cells | 305338

General information

Description	The HSF(SV40) immortalized cell line refers to cells that have been genetically modified to express the Simian Virus 40 (SV40) large T-antigen (T-Ag), which facilitates cellular immortalization. SV40 T-Ag is a potent oncoprotein that interacts with critical tumor suppressor proteins, such as p53 and retinoblastoma protein (Rb), leading to the inactivation of their tumor-suppressive functions. This interaction disrupts normal cell cycle control mechanisms, allowing cells to bypass senescence and proliferate indefinitely. Due to their immortalized nature and the critical involvement of SV40 T-Ag in their transformation, HSF(SV40) cells are widely used in cancer research, particularly in studies related to viral oncogenesis, cell cycle regulation, and therapeutic interventions targeting molecular chaperones and tumor suppressor pathways. Their use provides valuable insights into the interplay between viral oncoproteins and host cell regulatory networks, paving the way for the development of targeted cancer therapies.
Organism	Human

Characteristics

Morphology	Fibroblast-like
Cell type	Human Splenic Fibroblast
Growth properties	Adherent

Regulatory Data

Citation	HSF(SV40) (Cytion catalog number 305338)
Biosafety level	1
NCBI_TaxID	9606
GMO Status	GMO-S1: This HSF fibroblast line contains an SV40 T-antigen construct enabling immortalization for dermal and connective tissue studies. This classification applies only within Germany and may differ elsewhere.

Biomolecular Data

Handling

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Culture Medium	DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
Supplements	Supplement the medium with 10% FBS, 50 microgram/ml Ascorbinsäure
Dissociation Reagent	Accutase
Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.
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 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. 7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth. 8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
Flask Coating	None

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

Sterility	Mycoplasma contamination is 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.