

Immortalized Human Kidney Cancer-Associated Fibroblasts (CAFs)

Catalog Number: NEOCAF75

Cell Type: Immortalized Human Kidney Cancer-Associated Fibroblasts (CAFs)

Passage Number: P1

Cell Number: 1,000,000 cells/vial

Species: Human

Tissue Origin: Kidney Tumor Microenvironment

Growth Properties: Adherent

Morphology: Spindle-shaped fibroblast-like cells

Biosafety Level: BSL-2

Product Description

Immortalized Human Kidney Cancer-Associated Fibroblasts (CAFs) are derived from human kidney tumor stromal tissue and immortalized to provide a stable and reproducible in vitro model for cancer research. These CAFs exhibit characteristic activated fibroblast morphology and express multiple stromal and tumor-associated fibroblast markers involved in extracellular matrix remodeling, tumor progression, angiogenesis, fibrosis, and immune modulation.

These cells are ideal for studies involving:

- Tumor microenvironment interactions
 - Kidney cancer progression and metastasis
 - Fibrosis and extracellular matrix remodeling
 - Drug screening and anti-cancer therapeutics
 - Cytokine and growth factor signaling
 - Co-culture systems with tumor cells and immune cells
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Recommended Culture Conditions

- **Recommended Medium:** Fibroblast Growth Medium supplemented with 10% FBS and growth supplements
- **Incubation Conditions:** 37°C, 5% CO₂, humidified atmosphere
- **Subculture Ratio:** 1:3 to 1:5
- **Detachment Reagent:** 0.05% Trypsin-EDTA

- **Culture Vessel Coating:** Standard tissue culture-treated flasks
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Expression Markers

Positive Markers

- α -Smooth Muscle Actin (α -SMA / ACTA2)
- Fibroblast Activation Protein (FAP)
- Vimentin
- Fibroblast-Specific Protein-1 (FSP-1 / S100A4)
- PDGFR- β
- TE-7
- Collagen I
- Collagen III
- Fibronectin
- Tenascin-C
- CXCL12
- TGF- β 1
- VEGF
- IL-6
- α 1 Integrin (CD49a)
- CD90 (Thy-1)
- CD73
- CD44

Negative Markers

- CD31
 - CD34
 - Cytokeratin (Pan-CK)
 - EpCAM
 - E-Cadherin
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Functional Characteristics

- Enhanced extracellular matrix production
- Strong migratory and invasive support phenotype
- Secretion of inflammatory cytokines and growth factors



- Promotes tumor cell proliferation and angiogenesis
 - Suitable for 2D and 3D tumor microenvironment models
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Quality Control Testing

- Sterility Tested
 - Mycoplasma Tested
 - Morphology Verified
 - Marker Expression Validated by Immunofluorescence and/or Flow Cytometry
 - Viability > 85% upon thawing
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Storage and Stability

Storage Condition: Liquid Nitrogen Vapor Phase

Upon receipt, cells should be transferred directly to liquid nitrogen storage until ready for use. Avoid repeated freeze-thaw cycles.

Shipping Condition

Cells are shipped frozen on dry ice.

Intended Use

For Research Use Only (RUO).

Not intended for human therapeutic or clinical applications.