

Human Prostate Cancer-Associated Fibroblasts (CAFs)

Product Information

Product Name	Human Prostate Cancer-Associated Fibroblasts (CAFs)
Catalog Number	NEOCAF63
Cell Type	Primary Human Cancer-Associated Fibroblasts
Tissue Origin	Human Prostate Tumor Tissue
Species	Human
Passage Number	P1
Cell Number	1,000,000 cells/vial
Growth Properties	Adherent
Biosafety Level	BSL-2
Storage	Liquid Nitrogen Vapor Phase
Intended Use	Research Use Only (RUO)

Description

Human Prostate Cancer-Associated Fibroblasts (CAFs) are isolated from human prostate carcinoma tissue and expanded under optimized culture conditions. These fibroblasts are key stromal components within the tumor microenvironment and play critical roles in tumor progression, extracellular matrix remodeling, angiogenesis, immune modulation, metastasis, and therapeutic resistance.

These cells are suitable for cancer biology, tumor microenvironment studies, drug screening, fibrosis research, immuno-oncology, and cell-cell interaction assays.

Morphology

- Spindle-shaped fibroblast morphology
 - Adherent monolayer growth pattern
 - Typical activated fibroblast appearance with elongated cytoplasmic projections
-

Recommended Culture Conditions

Parameter	Specification
Culture Medium	Fibroblast Growth Medium supplemented with FBS and growth factors
Incubation Conditions	37°C, 5% CO ₂
Recommended Coating	Standard tissue culture-treated flasks
Subculturing Ratio	1:2 to 1:4
Cryopreservation Medium	10% DMSO-containing freezing medium

Expression Markers

Positive Markers

Human Prostate CAFs typically express:

- 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
 - Fibronectin
 - Tenascin-C
 - CXCL12 (SDF-1)
 - TGF- β 1
 - Periostin
 - Caveolin-1 (variable)
 - CD90 (Thy-1)
-



Negative Markers

Cells are negative for:

- CD31 (Endothelial Marker)
- CD45 (Hematopoietic Marker)
- Cytokeratin 8/18
- EpCAM
- E-Cadherin

Quality Control Testing

Test	Result
Sterility Testing	Negative
Mycoplasma Testing	Negative
Fungal Contamination	Negative
Cell Morphology Verification	Passed
Viability Post-Thaw	$\geq 70\%$

Applications

- Tumor Microenvironment Research
- Prostate Cancer Stromal Biology
- Drug Discovery & Screening
- Fibrosis Studies
- Immuno-Oncology Research
- Cell Signaling Studies
- ECM Remodeling Assays
- Co-culture Systems
- Exosome & Secretome Analysis

Cryopreservation & Handling

1. Thaw cells rapidly in a 37°C water bath.
2. Transfer contents to pre-warmed culture medium.



3. Centrifuge and resuspend cells in complete growth medium.
 4. Seed into appropriate culture vessels.
 5. Replace medium after 24 hours.
-

Safety Statement

This product is intended for research use only and is not intended for human therapeutic or diagnostic applications.

Storage & Stability

- Store frozen in liquid nitrogen vapor phase immediately upon arrival.
- Avoid repeated freeze-thaw cycles.
- Use appropriate PPE and biosafety procedures when handling human-derived materials.