

## **Immortalized Lung Adenocarcinoma Cancer-Associated Fibroblasts (CAFs)**

### **Product Information**

| <b>Item</b>              | <b>Description</b>                                                               |
|--------------------------|----------------------------------------------------------------------------------|
| <b>Product Name</b>      | Immortalized Lung Adenocarcinoma Cancer-Associated Fibroblasts (CAFs)            |
| <b>Catalog Number</b>    | NEOCAF68                                                                         |
| <b>Cell Type</b>         | Cancer-Associated Fibroblasts (CAFs)                                             |
| <b>Tissue Origin</b>     | Human Lung Adenocarcinoma Tumor Tissue                                           |
| <b>Species</b>           | Human                                                                            |
| <b>Growth Property</b>   | Adherent                                                                         |
| <b>Morphology</b>        | Spindle-shaped fibroblast-like morphology                                        |
| <b>Passage Number</b>    | Passage 1                                                                        |
| <b>Cell Number</b>       | 1,000,000 cells/vial                                                             |
| <b>Immortalization</b>   | hTERT-mediated immortalization                                                   |
| <b>Storage Condition</b> | Liquid Nitrogen Vapor Phase                                                      |
| <b>Biosafety Level</b>   | BSL-2                                                                            |
| <b>Quality Control</b>   | Tested for sterility, mycoplasma, and viability                                  |
| <b>Intended Use</b>      | For Research Use Only (RUO). Not for human therapeutic or clinical applications. |

### **Product Description**

Immortalized Lung Adenocarcinoma Cancer-Associated Fibroblasts (CAFs) are derived from human lung adenocarcinoma tumor microenvironment and immortalized to provide a stable and reproducible in vitro research model. These cells retain key fibroblast and tumor stromal characteristics associated with cancer progression, extracellular matrix remodeling, angiogenesis, tumor invasion, and immune modulation.

These CAFs are ideal for studies involving:

- Tumor microenvironment interactions
- Lung cancer biology
- Fibrosis and ECM remodeling
- Drug screening and anticancer therapeutics

- Immuno-oncology research
- Cell-cell interaction studies
- Exosome and cytokine analysis

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## Expression Markers

### Positive Markers

| Marker                                       | Expression |
|----------------------------------------------|------------|
| $\alpha$ -SMA (ACTA2)                        | Positive   |
| FAP                                          | Positive   |
| Vimentin                                     | Positive   |
| Fibroblast-Specific Protein-1 (FSP-1/S100A4) | Positive   |
| PDGFR- $\beta$                               | Positive   |
| Fibronectin                                  | Positive   |
| Collagen I                                   | Positive   |
| Tenascin-C                                   | Positive   |
| CXCL12                                       | Positive   |
| IL-6                                         | Positive   |
| VEGF                                         | Positive   |
| TGF- $\beta$ 1                               | Positive   |
| CD90 (Thy-1)                                 | Positive   |
| Caveolin-1                                   | Variable   |
| Periostin                                    | Positive   |

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### Negative Markers

| Marker               | Expression |
|----------------------|------------|
| CD31                 | Negative   |
| CD34                 | Negative   |
| Cytokeratin (Pan-CK) | Negative   |
| EpCAM                | Negative   |
| CD45                 | Negative   |
| E-Cadherin           | Negative   |

## Recommended Culture Conditions

| Component                     | Recommendation                                  |
|-------------------------------|-------------------------------------------------|
| <b>Culture Medium</b>         | Fibroblast Growth Medium or CAF-specific Medium |
| <b>FBS Supplementation</b>    | 10% Fetal Bovine Serum                          |
| <b>Incubation Conditions</b>  | 37°C, 5% CO <sub>2</sub>                        |
| <b>Culture Vessel Coating</b> | Optional collagen-coated flasks                 |
| <b>Medium Change</b>          | Every 2–3 days                                  |
| <b>Subculture Ratio</b>       | 1:3 to 1:5                                      |

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## Cryopreservation

Cells are cryopreserved in a validated freezing medium containing DMSO and serum supplement. Upon thawing, viability is typically greater than 85% when proper thawing procedures are followed.

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## Quality Assurance Testing

Each lot is tested for:

- Cell morphology verification
  - Marker expression analysis
  - Sterility testing
  - Mycoplasma detection
  - Post-thaw viability
  - Human pathogen screening (where applicable)
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## Applications

- Tumor stromal biology
- Lung adenocarcinoma research
- Cancer drug development
- CAF-targeted therapy studies
- Fibrosis and inflammation studies



- Extracellular matrix remodeling
  - Cytokine secretion analysis
  - Co-culture systems
  - 3D tumor spheroid models
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### **Storage and Handling**

- Store frozen cells in liquid nitrogen vapor phase immediately upon arrival.
  - Avoid repeated freeze-thaw cycles.
  - Rapid thawing at 37°C is recommended.
  - Handle using appropriate biosafety procedures.
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### **Disclaimer**

For Research Use Only.

Not intended for diagnostic, therapeutic, clinical, or human use applications.