**Product sheet**

# Human Gingival Fibroblasts (hGF) | 300703

## General information

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| **Description** | Human gingival fibroblasts (hGFs) are undifferentiated cells with multi-differentiation and self-renewal capacities. These mesenchymal cells provide many vital functions during development and adulthood. Thus, for instance they are responsible for a large part of the synthesis of the extracellular matrix in connective tissue and play an important role in wound healing. |
| **Organism** | Human |
| **Tissue** | Gingiva |
| **Applications** | Tissue regeneration, Wound healing studies |

## Characteristics

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| **Cell type** | Fibroblast |
| **Growth properties** | Adherent |

## Identifiers / Biosafety / Citation

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| **Citation** | Human Gingival Fibroblasts (hGF) (Cytion catalog number 300703) |

## Expression / Mutation

## Handling

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| **Culture Medium** | DMEM:Ham's F12, w: 3.1 g/L Glucose, w: 1.6 mM L-Glutamine, w: 15 mM HEPES, w: 1.0 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a) |
| **Medium supplements** | Supplement the medium with 10% FBS, 10 ng/ml bFGF, 10 microgram/L Insulin |
| **Passaging solution** | Accutase |

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| **Subculturing** | Remove the old medium from the adherent cells and wash them with PBS that lacks calcium and magnesium. For T25 flasks, use 3-5 ml of PBS, and for T75 flasks, use 5-10 ml. Then, cover the cells completely with Accutase, using 1-2 ml for T25 flasks and 2.5 ml for T75 flasks. Let the cells incubate at room temperature for 8-10 minutes to detach them. After incubation, gently mix the cells with 10 ml of medium to resuspend them, then centrifuge at 300xg for 3 minutes. Discard the supernatant, resuspend the cells in fresh medium, and transfer them into new flasks that already contain fresh medium. |
| **Freeze medium** | CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100) |

**Handling of cryopreserved cultures**

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. Optionally, skip centrifugation but remove any remaining freezing medium after 24 hours.
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.

## Quality control / Genetic profile / HLA

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| **Sterility** | Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.<br><br>To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections. |