Product sheet

L-929-GFP Cells | 305956

General information

Description	L-929-GFP cells are a fluorescently labeled derivative of the murine L-929 fibroblast cell line, which was originally established from subcutaneous connective tissue of an adult mouse. The parental L-929 line is one of the most extensively used mouse fibroblast models in biomedical research and is characterized by its adherent growth, spindle-shaped morphology, and robust proliferative capacity. L-929 cells are widely utilized in studies of cytotoxicity, inflammation, extracellular matrix biology, and host–pathogen interactions, and they are also commonly employed for the production and bioassay of cytokines such as tumor necrosis factor-α (TNF-α). The stable expression of green fluorescent protein (GFP) in L-929-GFP cells enables direct visualization and quantitative tracking of fibroblast behavior in real time. These cells are particularly useful for fluorescence-based applications including migration assays, co-culture experiments, tissue engineering studies, and live-cell imaging. L-929-GFP cells retain the core biological characteristics of the parental fibroblast line while providing enhanced utility for monitoring cell localization, proliferation, and interactions within complex cellular environments. Consequently, they serve as a versatile model for investigating stromal cell dynamics, wound healing processes, biomaterial compatibility, and immune-mediated cytotoxic responses. **Genetic modification:** Stably modified by replication-incompetent lentiviral transduction to express the ZsGreen1 green fluorescent protein reporter; maintained as a polyclonal population under puromycin selection (1–5 µg/mL). S1/BSL-1 containment.
Organism	Mouse
Tissue	Connective tissue
Synonyms	L929/GL50

Characteristics

Age	100 days
Gender	Male
Cell type	Fibroblast
Growth properties	Adherent

Regulatory Data

Citation	L929-GFP (Cytion catalog number 305956)
Biosafety level	1

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NCBI_TaxID	10090
CellosaurusAccession	CVCL_E2Z7
GMO Status	GMO-S1: This cell line contains a stably integrated ZsGreen1 green fluorescent protein reporter introduced via replication-incompetent lentiviral transduction. The resulting polyclonal cell population was maintained under puromycin selection (1–5 µg/mL). S1 containment is required. This classification applies only within Germany and may differ elsewhere.

Biomolecular Data

Antigen expression	ZsGreen1 (green fluorescent protein)

Handling

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
Dissociation Reagent	Accutase
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.
Seeding density	1 to 3 x 10^4 cells/cm^2
Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium. 7. Follow the procedure described under Post-Thaw Recovery
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
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