Product sheet

RAW 264.7-GFP Cells | 305699

General information

Description	RAW 264.7-GFP cells are a genetically modified derivative of the murine RAW 264.7 macrophage-like cell line, which originates from an adult mouse tumor of monocyte/macrophage lineage. These cells have been engineered to express green fluorescent protein (GFP), enabling real-time visualization of cellular processes such as morphology, migration, and phagocytic activity under fluorescence microscopy. The parental RAW 264.7 line is widely used as a model for innate immune responses, as it retains many functional characteristics of activated macrophages, including the ability to produce cytokines, nitric oxide, and reactive oxygen species upon stimulation. The incorporation of GFP allows for dynamic, non-invasive monitoring of macrophage behavior in vitro, making RAW 264.7-GFP cells particularly valuable for live-cell imaging studies and high-content screening applications. These cells respond robustly to pro-inflammatory stimuli such as lipopolysaccharide (LPS) and interferon-gamma, leading to activation of signaling pathways including NF-κB and MAPK. This makes them a useful model for investigating inflammatory signaling, host-pathogen interactions, and the effects of pharmacological agents on macrophage activation. However, as with the parental line, researchers should consider that RAW 264.7-derived models may exhibit altered regulatory pathways compared to primary macrophages.
Organism	Mouse
Tissue	Ascites
Disease	Mouse leukemia
Synonyms	GFP/RAW264.7

Characteristics

Age	Adult
Gender	Male
Growth properties	Adherent

Regulatory Data

Citation	RAW 264.7-GFP (Cytion catalog number 305699)
Biosafety level	2
NCBI_TaxID	10090

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CellosaurusAccession	CVCL_D7C8

Biomolecular Data

Protein expression	GFP

Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
Seeding density	2 to 5 x 10^4 cells/cm^2
Fluid renewal	3 times per week
Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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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