

RAW 264.7 | 400319

General Information

Description
RAW 264.7 is a murine macrophage cell line derived from the peritoneal exudate of mice infected with Mycobacterium tuberculosis. It is characterized by its ability to phagocytose and kill intracellular pathogens, including Mycobacterium tuberculosis. RAW 264.7 cells are commonly used in immunology and infectious disease research to study macrophage function, including phagocytosis, antigen presentation, and cytokine production. The cell line is maintained in the presence of gamma-interferon (γ-IFN) and is highly responsive to lipopolysaccharide (LPS) and other stimuli. RAW 264.7 cells are known to undergo pyroptosis, a form of programmed cell death characterized by cell swelling and membrane rupture. RAW 264.7 cells are also used to study the effects of various drugs and treatments on macrophage function.

Organism Murine

Tissue Macrophage

Disease Mycobacterium tuberculosis (M. tuberculosis)

Synonyms RAW264, RAW2647, RAW264.7, RAW264.7, RAW264.7, RAW264.7, Raw 264.7, Raw264.7

Characteristics

Breed/Subspecies C57BL/6J

Age 4-6 weeks

Gender Male

Cell type Macrophage

Growth properties Adherent

References and Safety

Citation RAW 264.7 (ATCC CCL-103) | ATCC 400319

Biosafety level 2

NCBI_TaxID 10090

CellosaurusAccession CVCL_0493

Product sheet

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Characteristics

Receptors expressed IgG (Fc) γ₁ (C3)

Antigen expression 2

Viruses Influenza A virus (RT) Influenza C virus

Products IgG

Culture

Culture Medium RPMI 1640 2.0 mM L-glutamine 2.0 mM NaHCO₃ (820700a)

Supplements 10% FBS

Dissociation Reagent Trypsin-EDTA

Doubling time RAW264.7 11 30

Subculturing PBS

Seeding density 4 × 10⁴

Fluid renewal 2 3

Freeze medium FBS + 10% DMSO

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Thawing and Culturing Cells

1. Thaw the vial rapidly in a 37°C water bath. Transfer the cells to a 15 mL centrifuge tube containing 10 mL of pre-warmed complete DMEM medium.
2. Centrifuge the cells at 300 × g for 3 minutes. Remove the supernatant and resuspend the cell pellet in 10 mL of pre-warmed complete DMEM medium.
3. Seed the cells into a T75 flask containing 70% complete DMEM medium. Incubate the cells at 37°C in a 5% CO₂ atmosphere.
4. After 24 hours, check the cell attachment. If the cells do not attach, repeat the seeding process.
5. Once the cells are attached, replace the medium with fresh complete DMEM medium.
6. After 24 hours, check the cell attachment. If the cells do not attach, repeat the seeding process.
7. After 24 hours, check the cell attachment. If the cells do not attach, repeat the seeding process.
8. After 24 hours, check the cell attachment. If the cells do not attach, repeat the seeding process.

Incubation Atmosphere

37°C, 5% CO₂

Flask Coating

Not required

Freezing Procedure

Resuspend the cells in 1 mL of freezing medium and transfer to a cryovial. Store at -80°C.

Shipping Conditions

Store at -80°C during shipping.

Storage Conditions

Store at -150°C to -196°C in liquid nitrogen.

HLA

Sterility

The cells are provided in a sterile, cryoprotected medium. The medium is free of mycoplasmas and endotoxins. The cells are tested for mycoplasma contamination using PCR.

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XXXXXXXX XXXXXXXXXXXX STRAmelogenin: x/y

- M_18-3: 18
- M_4-2: 22.3/23.3
- M_6-7: 12
- M_3-2: 14
- M_19-2: 12/14
- M_7-1: 25 XXXXXXXX
- M_1-1: 15/16
- M_8-1: 13
- M_2-1: 16
- M_15-3: 22 XXXX
- M_6-4: 18
- M_11-2: 17
- M_1-2: 17
- M_17-2: 14/16
- M_12-1: 16/17
- M_5-5: 14
- M_X-1: 25
- M_13-1: 16 XXXXXXXX
- Human D4/D8: -