Product sheet

P-815 Cells | 400242

General information

Description	P815 is a mastocytoma cell line derived from the DBA/2 mouse strain. This cell line is a valuable model in immunology, particularly for studying mast cell biology, immune recognition, and the mechanisms of tumor rejection. P815 cells are known for their ability to express a variety of surface antigens and for their use in the study of antigenic modulation and differentiation in mast cells. Notably, P815 cells are also widely used in assays to evaluate the cytotoxic activity of natural killer (NK) cells and cytotoxic T lymphocytes (CTLs). Their high susceptibility to lysis by these immune cells makes them ideal for use in various immunological assays, including the standard chromium release assay for measuring cell-mediated cytotoxicity. Additionally, P815 cells have been employed in genetic studies, particularly those involving the manipulation of genes that affect cell surface antigen presentation and immune evasion strategies.
Organism	Mouse
Tissue	Hematopoietic
Disease	Mastocytoma
Synonyms	P815, P 815

Characteristics

Breed/Subspecies	DBA/2
Gender	Male
Morphology	Round cells
Cell type	Mast cell
Growth properties	Suspension, some adherent cells

Regulatory Data

Citation	P-815 (Cytion catalog number 400242)
Biosafety level	1
NCBI_TaxID	10090

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CellosaurusAccession	CVCL_2154

Biomolecular Data

Products	Lysozyme

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 3.7 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Supplements	Supplement the medium with 10% FBS
Subculturing	Start cultures at 5 x 10^5 cells/ml and maintain between 3 x 10^5 and 1 x 10^6 cells/ml. Subculture by transferring an appropriate aliquot of the suspension into new flasks filled with fresh cell culture medium. Detach adherent cells by washing with PBS first and incubation with Accutase at ambient temeratur 8-10 minutes. Combine with the nonadherent cells and distribute into new cell culture flasks.
Seeding density	1 to 2 x 10^6 cells/ml
Fluid renewal	2 to 3 times per week
Post-Thaw Recovery	After thawing, allow the cells to recover from the freezing process for at least 24 hours.
Freeze medium	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

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 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. 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.
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

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