Product sheet

P388 Cells | 305226

General information

Description	P388 is a murine lymphoid neoplasm cell line derived from a spontaneous lymphocytic leukemia in DBA/2 mice. It is commonly used in cancer research, particularly for studying leukemia and testing anti-cancer compounds. P388 cells grow in suspension and exhibit a doubling time of approximately 24 hours under optimal culture conditions. The cells are characterized by their rapid proliferation and high sensitivity to chemotherapeutic agents, making them a valuable tool for evaluating the efficacy of new cancer treatments. P388 cells express typical markers of lymphoid lineage, including surface immunoglobulins and various cell surface antigens associated with B-cells. Researchers often utilize this cell line in in vivo models by inoculating mice to study tumor growth, metastasis, and response to therapies. Additionally, the P388 cell line serves as a model for investigating the molecular mechanisms underlying leukemia, such as the role of specific oncogenes and tumor suppressor genes. Despite its widespread use, the P388 cell line has limitations, such as the lack of human relevance and potential genetic drift over extended culture periods. Therefore, researchers often complement studies involving P388 cells with other models to obtain a comprehensive understanding of leukemia biology and treatment responses.
Organism	Mouse
Disease	Mouse lymphoma
Synonyms	P-388

Characteristics

Breed/Subspecies	DBA/2
Gender	Female
Cell type	Pre B cell
Growth properties	Suspension

Regulatory Data

Citation	P388 (Cytion catalog number 305226)
Biosafety level	1
NCBI_TaxID	10090

P388 Cells | 305226

CellosaurusAccession	CVCL_7222

Biomolecular Data

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
Subculturing	Suspension cells: Remove cells from substrate by pipetting with fresh medium. To obtain single cells, pass the suspension several times through a 22 gauge needle and dispense into new flasks.
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

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.