Product sheet

U266 Cells | 300259

General information

Description	The U266 cell line, also known as U-266, is a human multiple myeloma cell line that was established from the peripheral blood of a 53-year-old man with IgE myeloma. This cell line is characterized by the secretion of both light and heavy immunoglobulin chains, predominantly lambda light chains and IgE heavy chains. The U266 cell line exhibits typical B lymphocyte markers and has been used extensively in the study of myeloma biology, particularly in understanding the pathophysiological mechanisms of plasma cell malignancies and the immune response. U266 cells are valuable for their role in drug discovery and development, providing a robust model for evaluating the efficacy of anti-myeloma agents. They are also utilized in the study of myeloma cell interactions with the bone marrow microenvironment, which is crucial for understanding myeloma progression and resistance to therapy. Genetic studies have revealed several chromosomal abnormalities in U266 cells, which contribute to their malignant phenotype and resistance to apoptosis. This cell line has been instrumental in the advancement of molecular targeted therapies in multiple myeloma.
Organism	Human
Tissue	Plasma cell
Disease	Multiple Myeloma
Synonyms	U266B1, U266-B1, U266 B1, U-266, U 266, U266S, U266BL, U266

Characteristics

Age	53 years
Gender	Male
Growth properties	Suspension

Regulatory Data

Citation	U266 (Cytion catalog number 300259)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_0566

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% heat-inactivated FBS
Subculturing	Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of 5 x 10^5 cells/ml and keep the cell concentration within the range of 3 x 10^5 to 1 x 10^6 cells/ml for optimal growth.
Seeding density	5 x 10^5 cells/mL
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.

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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 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.