Product sheet

A20 Cells | 305263

General information

Description	The A20 cell line is derived from a reticulum cell sarcoma in a mouse and is widely used in immunology and cancer research. Reticulum cell sarcoma is a type of B-cell lymphoma, and A20 cells provide a valuable model for studying the biology of B-cell lymphomas and the immune response. These cells are particularly useful for investigating the mechanisms of B-cell development, activation, signaling, and the interaction between tumor cells and the immune system. Additionally, A20 cells play a crucial role in research focused on the production and function of cytokines, which are essential for immune regulation. A20 cells display a lymphoblastic morphology and express surface markers typical of B-cells, including surface immunoglobulin and major histocompatibility complex (MHC) molecules. Researchers utilize A20 cells to study antigen presentation, B-cell receptor signaling, and the role of various cytokines in immune responses. These cells are also instrumental in the development and testing of immunotherapies, such as monoclonal antibodies and checkpoint inhibitors, aimed at treating B-cell lymphomas and other hematological malignancies. Additionally, A20 cells serve as a model for evaluating the efficacy and safety of novel therapeutic agents in preclinical studies. The utility of A20 cells in immunological research and the understanding of B-cell pathophysiology highlights their importance in advancing cancer research and developing new treatment strategies.
Organism	Mouse
Disease	Mouse reticulum cell sarcoma
Synonyms	A-20

Characteristics

Breed/Subspecies	BALB/cAnN
Age	>15 months
Gender	Unspecified
Morphology	Lymphoblast
Cell type	B lymphocyte
Growth properties	Suspension

Regulatory Data

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Citation	A20 (Cytion catalog number 305263)
Biosafety level	1
NCBI_TaxID	10090
CellosaurusAccession	CVCL_1940

Biomolecular Data

Tumorigenic	Yes

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, add 2.5 g/L glucose and 10 mM HEPES
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.