Product sheet

WIL2 Cells | 302011

General information

Description	Wil2 is a human B lymphoblastoid cell line derived from peripheral blood B lymphocytes of an adult donor and subsequently immortalized through Epstein–Barr virus (EBV) transformation. As an EBV-positive suspension cell line, Wil2 exhibits characteristic features of activated B cells, including continuous proliferation, expression of B-cell surface markers, and the capacity for immunoglobulin synthesis. The cells grow in suspension as single cells or small clusters and are commonly maintained in standard lymphocyte culture conditions supplemented with serum. Phenotypically, Wil2 cells express typical B-lineage markers such as CD19, CD20, and surface immunoglobulins, along with activation-associated markers induced by EBV latent gene expression. The presence of EBV episomes drives proliferation and supports long-term culture, making this cell line a useful model for studying viral latency, B-cell activation, and host–virus interactions. Additionally, Wil2 has been used in immunological and molecular biology research focused on antibody production, antigen presentation, and signal transduction pathways in transformed B lymphocytes. While Wil2 serves as a representative EBV-transformed B-cell model, available published data on its detailed genetic background and functional specialization remain relatively limited compared to more extensively characterized lymphoblastoid lines. Researchers are encouraged to validate specific phenotypic or functional properties in their experimental context and consult updated databases or primary literature for the most current characterization data.
Organism	Human
Tissue	Spleen
Disease	Hereditary spherocytosis
Synonyms	WIL-2, Wil.2, WI-L2, Wi-L2

Characteristics

Age	5 years
Gender	Male
Ethnicity	Caucasian
Cell type	B lymphoblast
Growth properties	Suspension

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Regulatory Data

Citation	WIL2 (Cytion catalog number 302011)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_6544

Biomolecular Data

Karyotype	46, hypodiploid

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	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	1 x 10^5 cells/mL
Fluid renewal	2 times per week
Post-Thaw Recovery	Fast
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.
Flask Coating	None
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.