Product sheet

Wil2-S Cells | 305905

General information

Description	WIL2-S is a human B-lymphoblastoid cell line derived from peripheral blood lymphocytes and immortalized by Epstein-Barr virus (EBV) infection. It originates from a healthy adult donor and exhibits characteristics typical of EBV-transformed B cells, including suspension growth, expression of B-cell surface markers, and stable proliferation in standard lymphoid culture media. As a non-tumor-derived, EBV-immortalized lymphoblastoid line, WIL2-S is widely used as a reference model in immunology, genotoxicity, and DNA repair studies. WIL2-S has been extensively applied in cytogenetic and mutagenesis assays, particularly in micronucleus and chromosomal instability testing, due to its stable karyotype and well-characterized response to DNA-damaging agents. The cell line is proficient in DNA repair pathways and has served as a comparator in studies evaluating oxidative stress, radiation-induced damage, and chemotherapeutic genotoxicity. Its lymphoid origin and reproducible growth characteristics make it suitable for evaluating clastogenic and aneugenic effects in vitro under controlled experimental conditions. Because WIL2-S is not derived from a malignant tumor but rather represents an EBV-immortalized normal B-cell lineage, it provides an important baseline model for distinguishing cancer-specific molecular alterations from general lymphoid cellular responses. Researchers commonly use this cell line as a non-transformed reference in studies of genome stability, immune cell signaling, and mechanisms of cellular stress response.
Organism	Human
Tissue	Spleen
Disease	Hereditary spherocytosis
Synonyms	WIL2-S, WIL2/S, WIL2S, WIL2 Secreting

Characteristics

Age	5 years
Gender	Male
Ethnicity	Caucasian
Morphology	lymphoblast
Cell type	B-cell
Growth properties	suspension

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Regulatory Data

Citation	Wil2-S (Cytion catalog number 305905)
Biosafety level	2
NCBI_TaxID	9606
CellosaurusAccession	CVCL_3809

Biomolecular Data

Mutational profile	Mutation: p.Ser1163Ala, Homozygous

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
Dissociation Reagent	None
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.