Product sheet

B-LCL-HROG02 Cells | 302106

General information

Description	B-LCL-HROG02 is a human Epstein-Barr virus (EBV)-transformed B lymphoblastoid cell line (B-LCL) established from the peripheral blood of a 68-year-old Caucasian male gastric cancer patient within the HROG biobank series, the gastric cancer counterpart of the HROC colorectal cancer B-LCL collection. EBV-mediated in vitro immortalization of primary peripheral blood B lymphocytes generated a stably proliferating suspension cell line with lymphoblast-like morphology. HROG02 cells constitutively express EBV latency antigens (EBNA-1, -2, -3, LMP-1, -2) and high levels of HLA class I and II molecules, co-stimulatory molecules CD80 and CD86, adhesion molecules CD54 and CD58, and B cell markers CD19, CD20, and CD23. B-LCL-HROG02 is applied in T cell and NK cell functional assays, HLA typing, mixed lymphocyte reactions, antigen presentation studies, and CTL induction protocols. Within the HROG patient-matched biobank, it provides a defined immunological reference for gastric cancer research, enabling autologous or allogeneic studies of tumor-associated immune responses. The line supports investigations of gastric cancer-specific T cell reactivity and patient-matched immune assay systems relevant to gastric tumor immunology. B-LCL-HROG02 is cultured in suspension in RPMI 1640 supplemented with 15–20% FBS at 37°C in a humidified 5% CO_2 atmosphere. Cells are passaged every 2–3 days by dilution to 2–5 × 10^5 cells/ml. No enzymatic dissociation is required. All work with this EBV-positive cell line must comply with BSL-2 biosafety containment requirements and applicable institutional and national regulations governing EBV-transformed biological material.
Organism	Human
Tissue	Peripheral blood
Disease	EBV-transformed B lymphoblastoid cell line (B-LCL); gastric cancer-associated donor
Applications	Immunology research; T cell and NK cell assays; HLA typing; antigen presentation studies; mixed lymphocyte reactions; CTL assay target cells; gastric cancer immunology

Characteristics

Age	68 years
Gender	Male
Ethnicity	Caucasian
Morphology	Lymphoblast-like
Cell type	B lymphoblast

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Growth properties	Suspension

Regulatory Data

Citation	B-LCL-HROG02 (Cytion catalog number 302106)
Biosafety level	2
NCBI_TaxID	9606
GMO Status	GMO-S2: This B-LCL contains a stably maintained EBV episome encoding viral latent-phase genes (EBNA-1/-2/-3, LMP-1/-2). EBV is classified as a risk group 2 pathogen. Handling requires BSL-2 containment. This classification applies within Germany; regulations may differ in other jurisdictions.

Biomolecular Data

Viruses	Transformant: EBV

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 15–20% FBS
Doubling time	24 to 48 hours
Subculturing	Dilute the culture to 2–5 × 10^5 cells/ml with fresh pre-warmed complete medium every 2–3 days. Count viable cells before passaging to maintain optimal density. Do not allow cultures to exceed 2 × 10^6 cells/ml. Centrifugation (300 × g, 5 min) may be used to exchange medium when needed. No enzymatic dissociation is required.
Split ratio	1 to 4
Seeding density	2 to 5 × 10^5 cells/ml
Fluid renewal	Every 2 to 3 days
Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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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 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium. 7. Follow the procedure described under Post-Thaw Recovery
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