B-LCL-HROG02

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.

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

CLASSIFICATION

Organism	Human
Sex	Male
Growth properties	Suspension
GMO status	GMO-S2

GMO status details

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.

Biosafety level	2

CHARACTERISTICS

Morphology	Lymphoblast-like
Cell type	B lymphoblast
Doubling time	24 to 48 hours

IDENTIFIERS

Citation

B-LCL-HROG02 (Cytion catalog number 302106)

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Banking information
Sparkasse Heidelberg
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BIC: SOLADES1HDB

NCBI TaxID	9606

EXPRESSION AND SUSCEPTIBILITY

Viruses

Transformant: EBV

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 15–20% FBS

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

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 200 x g for 5 minutes, carefully discard the supernatant containing freezing medium.
Follow the procedure described under Post-Thaw Recovery

QUALITY CONTROL AND CRYOPRESERVATION

Freeze medium	As a cryopreservation medium, we use complete growth medium + 10% DMSO for adequate post-thaw viability.

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.

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.

DONOR

Donor age	68 years
Ethnicity	Caucasian

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Third-party agreements apply	Yes

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