

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.

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

Growth properties

Suspension

Regulatory Data

B-LCL-HROG02 Cells | 302106**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 $2\text{--}5 \times 10^5$ 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 ($300 \times g$, 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 $200 \times g$ 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