CH27 Mouse B Cell Lymphoma Cell Line

Cancer Cell Line

Cat. # SCC115

Pack size: ≥1X10^6 viable cells/vial

Store in liquid nitrogen

FOR RESEARCH USE ONLY.
NOT FOR USE IN DIAGNOSTIC PROCEDURES.
NOT FOR HUMAN OR ANIMAL CONSUMPTION.

Certificate of Analysis

Background

CH27 Mouse B Cell Lymphoma Cell Line is one of the CH series of mouse B-cell lymphomas that arise from the spleen cells of B10.*H-2*^{a}*-H-4*^{b} *p/Wts* (2^a4^b) mice, either spontaneously or after transplantation of the spleen cells to syngeneic or F1 hybrid recipients[1, 2, 3]. CH27 cells express surface IgM and Ia antigens[3] along with Ly-1 (CD5)[4] and Ig which bind sheep (SRBC) and chicken erythrocytes and bromelain-treated mouse erythrocytes[2, 3, 4]. The hapten recognized by SRBC-binding CH lymphomas is a phospholipid, either phosphatidylchone or sphingomyelin[5]. Phospholipids are a common component of cell membranes and thus cells expressing immunoglobulin with specificity for SRBC can also be found in the spleens of normal mice[7]. This suggests that CH lymphomas represent neoplastic analogues of Ly-1+ normal B-cells[3]. CH27 is a useful model for the study of b-cell biology and tumor immunology.

Quality Control Testing

- Each vial contains ≥ 1X10^6 viable cells.
- Cells are tested negative for infectious diseases by a Mouse Essential CLEAR panel by Charles River Animal Diagnostic Services.
- Cells are verified to be of mouse origin and negative for inter-species contamination from rat, chinese hamster, Golden Syrian hamster, human and non-human primate (NHP) as assessed by a Contamination CLEAR panel by Charles River Animal Diagnostic Services.
- Cells are negative for mycoplasma contamination

Storage and Handling

CH27 Mouse B Cell Lymphoma cells can be cultured for at least 10 passages after initial thawing without significantly affecting the cell marker expression and functionality.

Representative Data

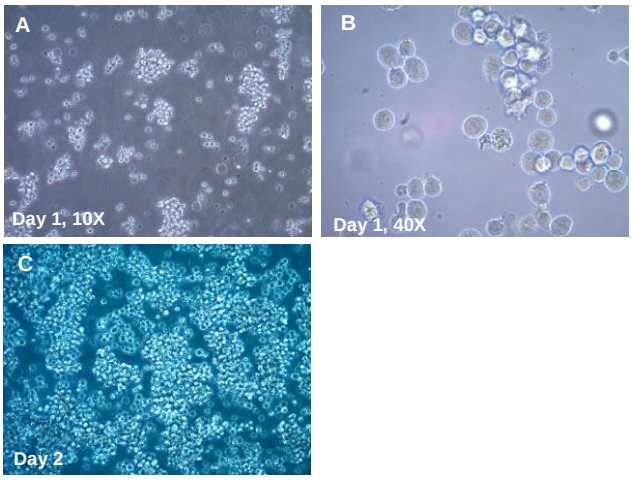

Figure 1. Days 1 (**A, B**) and 2 (**C**) after thaw.

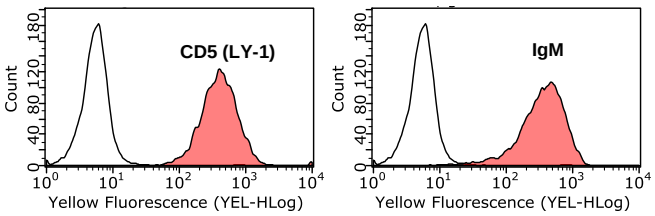

Figure 2. CD27 cells express surface IgM and Ly-1 (CD5).

SPECIES LEGEND: **H** Human **Ca** Canine **M** Mouse **R** Rat **Rb** Rabbit **B** Bovine **P** Porcine **WR** Most Common Vertebrates

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Protocols

CH27 cells grow as loose cell clusters in suspension and thus do not require enzymatic detachment or dissociation. Passage when the cell density reaches 1–1.5 million cells/mL. Optimal plating density should be ~200,000 - 250,000 cells/mL. The cells should not be grown at excessively high densities.

Thawing Cells

1. Do not thaw the cells until the recommended medium is on hand. Cells can grow on normal tissue cultureware surfaces without any additional coating.

   Cells are thawed and expanded in RPMI 1640 Complete Medium (Cat. No. SLM-240-B) **or** in RPMI 1640 (Sigma Cat. No. R8758) with 2 mM L-Glutamine (Sigma Cat. No. G7513) and 10% FBS (Cat. No. ES-009-B) and 1X Penicillin/Streptomycin (optional, Cat. No. TMS-AB2-C).
2. Remove the vial of frozen CH27 cells from liquid nitrogen and incubate in a 37°C water bath. Closely monitor until the cells are completely thawed. Maximum cell viability is dependent on the rapid and complete thawing of frozen cells.

   IMPORTANT: Do not vortex the cells.
3. As soon as the cells are completely thawed, disinfect the outside of the vial with 70% ethanol. Proceed immediately to the next step.
4. In a laminar flow hood, use a 1 or 2 mL pipette to transfer the cells to a sterile 15 mL conical tube. Be careful not to introduce any bubbles during the transfer process.
5. Using a 10 mL pipette, slowly add dropwise 9 mL of CH27 Expansion Medium (Step 1 above) to the 15 mL conical tube.

   IMPORTANT: Do not add the entire volume of media all at once to the cells. This may result in decreased cell viability due to osmotic shock.
6. Gently mix the cell suspension by slowly pipetting up and down twice. Be careful not to introduce any bubbles.

   IMPORTANT: Do not vortex the cells.
7. Centrifuge the tube at 300 x g for 2-3 minutes to pellet the cells.
8. Decant as much of the supernatant as possible. Steps 5-8 are necessary to remove residual cryopreservative (DMSO).
9. Resuspend the cells in 15 – 20 mL of CH27 Expansion Medium.
10. Transfer the cell suspension to a T75 flask.
11. Incubate the cells at 37°C in a humidified incubator with 5% CO_2.

Subculturing Cells

CH27 suspension cells require media replenishment every 2-3 days. Passage cells when the cell density is at 1 -1.5 million cells/mL.

1. Remove flask from incubator, tighten cap and place in tissue culture hood.
2. Dislodge any cells that may adhere to the flask by firmly tapping the side of the flask with the palm of the hand and gently swirl the medium over the cells to mix. Visually inspect flask to ensure the cells have been dislodged and the suspension is free of contaminants.
3. Determine cell count and viability using a hemocytometer or automated cell counter.
4. Cells are typically plated at a density of 200,000 - 250,000 cells/mL

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Cryopreservation of Cells

CH27 Mouse B-Cell Lymphoma Cell Line may be frozen in the expansion medium plus 10% DMSO using a Nalgene slow freeze Mr. Frosty container.

References

1. Lanier LL, Arnold LW, Raybourne RB, Russell S, Lynes MA, Warner NL, Haughton G (1982) Transplantable B-cell lymphomas in B10.*H-2*^{a}*H-4*^{b} *p*/Wts mice. *Immunogenetics* 16(4): 367-371.
2. Bishop GA, Haughton G (1985) Use of the CH lymphomas as models of murine B cell differentiation. *Immunol Res* 5(4): 263-70.
3. Haughton G, Arnold LW, Bishop GA, Mercolino TJ (1986) The CH series of murine B cell lymphomas: neoplastic analogues of Ly-1+ normal B cells. *Immunol Rev* 93: 35-51.
4. Pennell CA, Arnold LW, Lutz PM, LoCascio NJ, Willoughby PB, Haughton G (1985) Cross-reactive idiotypes and common antigen binding specificities expressed by a series of murine B-cell lymphomas: etiological implications. *Proc Natl Acad Sci USA* 82: 3799-3803.
5. Mercolino TJ, Arnold LW, Haughton G (1986) Phosphatidyl choline is recognized by a series of Ly-1+ murine B cell lymphomas specific for erythrocyte membranes. *J Exp Med* 163: 155-165.
6. Pennell CA, Arnold LW, Haughton G, Clarke SH (1988) Restricted Ig variable region gene expression among Ly-1+ B cell lymphomas. *J Immunol* 141(8): 2788 - 2296.
7. Bishop GA, Haughton G (1985) H-2 control of expression of an idiotype shared by normal B cells and a B-cell lymphoma. *Immunogenetics* 21: 355-366.

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