

Porcine B Lymphoma Cell Lines (3 Lines)

Case 20160314

3 Cell lines (Murtaugh001, Murtaugh002, Murtaugh003) established by 3 rounds of limiting dilution from splenic and subiliac lymph node lymphomas. Surface marker staining identified the cells as CD21⁺, CD79a⁺, CD20⁺, PAX5⁺, and CD3⁻ and cells were grown and easily passaged in cell culture. Transcriptome analysis validating the initial cytometric findings, confirming their identity as B cell lymphomas, and suggesting that they arose from germinal center centroblasts with aberrant control of BCL6 expression.

Developed by:

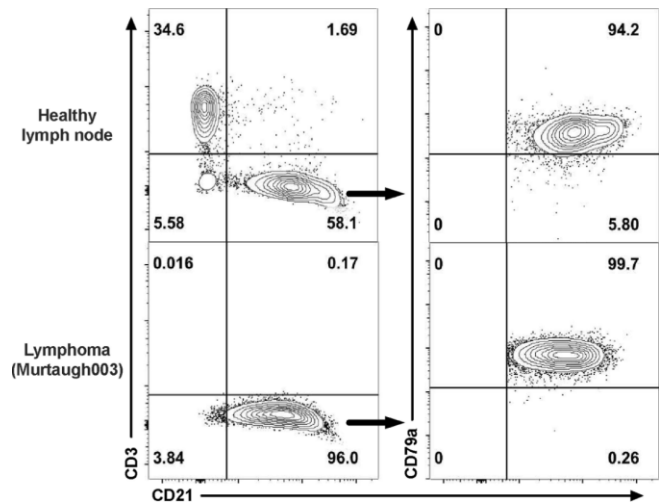
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Potential applications:

- Investigate porcine B cell cancers and immune responses
- Grow viruses to assess host responses
- Virus Propagation

Features and Benefits

- First and only porcine B cell line available
- Highly proliferative: Cell lines grow for more than 60 passages (16 months) with a doubling time of 16 hours.
- Robust: Tolerate cryogenic storage and thawing.



Information

Organism	<i>Sus scrofa</i> (pig)
Tissue	Lymphoma (subiliac lymph node and spleen tumors)
Cell Type	Porcine B cell lymphoma
Morphology	Round
Culture Properties	Non-adherent, suspended, clustered. Doubling time of 16 hours
Biosafety level	BSL1
Storage	Liquid nitrogen. 50% FBS, 40% supplemented RPMI, 10% DMSO
Growth media	RPMI media supplemented with 10mM HEPES buffer, 1X non-essential amino acids, 1mM sodium pyruvate, 50ug/ml gentamycin, 5U/ml penicillin-streptomycin and 5-10% FBS
Propagation protocol	Divide once per week at 1:5 ratio

References

M.C. Rahe, C.M.T Dvorak, B. Wiseman, D. Martin, M.P. Murtaugh. "Establishment and characterization of a porcine B cell lymphoma cell line." *Experimental Cell Research*. 390(2) May 2020.
<https://doi.org/10.1016/j.yexcr.2020.111986>.