



Showcasing research on a microfluidic device for single cell culture from Professor Dayu Liu's laboratory, School of Medicine, South China University of Technology, Guangzhou, China.

Microfluidic single-cell culture represents a versatile approach for tumor stem cell expansion and tumor organoid generation

We present a microfluidic single-cell culture approach that leverages the anti-apoptotic and self-renewal properties of tumor stem cells (TSCs) for their selective expansion without requiring surface marker-based isolation. The method enables efficient generation of single-cell-derived tumor organoids (STOs) with well-defined genetic backgrounds, effectively capturing intratumoral heterogeneity for developing personalized therapeutic strategies. Validated across tumors from diverse tissue origins, this platform establishes a versatile tool for TSC research and precision medicine applications.

Image reproduced by permission of Jueming Chen from *Lab Chip*, 2026, **26**, 799.

As featured in:



See Lihui Wang, Dongguo Lin, Dayu Liu *et al.*, *Lab Chip*, 2026, **26**, 799.