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Construction of Matrigel encapsulated PDOs (ME-PDOs)

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We use this protocol and it's working

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Abstract

Establishment of patient-derived organoids (PDOs) from freshly resected clinical breast cancer specimens.

Construction of Matrigel encapsulated PDOs (ME-PDOs)

1 The BRC tissues were digested as described above. Briefly, the tissues were digested on a shaker at 37 °C for 1–2 hours with intermittent pipetting until the visible pieces disappeared.

2 Dissociated cell clusters were spun down by centrifugation at 1,200 rpm and 4 °C for 5 minutes. The resulting dissociated cell clusters or single cells were resuspended in cold Matrigel (Corning) diluted to a concentration of 50% and seeded in prewarmed 24-well plate using drops of 25 µL each.

3 The drops were solidified in a 5% CO_2 incubator at 37 °C for 30 minutes, followed by addition of 1.5 mL organoid culture medium (bioGenous) to each well, which was refreshed every 2 to 3 days for around 2 weeks totally. Then the ME-PDOs were digested into single ME-PDO for further test.

Protocol references

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2. Broutier, L. et al. Human primary liver cancer-derived organoid cultures for disease modeling and drug screening. *Nat Med* **23**, 1424-1435 (2017).