

Resource Summary Report

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A fast and simple fluorometric method to detect cell death in 3D intestinal organoids

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Protocol Information

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Group: BioTechniques

Summary: This protocol describes a novel fluorometric method for the quantitative measurement of specific organoid cell death. Organoids are stained simultaneously with the cell impermeable nuclear dye propidium iodide and cell permeable Hoechst 33342. While Hoechst allows in-well normalization to cell numbers, propidium iodide detects relative proportion of dead cells independent of hydrogel. Measurement and analysis time, as well as usability are drastically improved in comparison to other established methods. Parallel multiplexing of this method with established assays measuring mitochondrial activity further enhances its applicability in personalized medicine and drug discovery.

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