SARTORIUS

Product Guide

iQue® Cell Count and Viability Kit

Product Information

Presentation, Storage and Stability

The iQue® Cell Count and Viability Kit contains a sufficient quantity of reagents for measurement of cell count and viability. The kit is available for use in 1x96, 5x96, 1x384, 5x384-well formats, and includes iQue® Live Viability (R/Red) Dye, iQue® Counting Beads, and USB Flash Drive Containing Analysis Templates. Upon receipt, the iQue® Cell Count and Viability Kit should be stored at 2-8°C. The kit is stable for at least 6 months from the date of receipt.

Product Name	Cat. No.	Format
iQue® Cell Count and Viability Kit	BA-97110	1x96-well
	BA-97111	5x96-well
	BA-97112	1x384-well
	BA-97113	5x384-well

Kit Componenents	Cat. No. BA-97110 1x96-well	Cat. No. BA-97111 5x96-well	Cat. No. BA-97112 1x384-well	Cat. No. BA-97113 5x384-well	Storage	Stability
iQue® Live Viability (R/Red) Dye	1 vial (30 µL)	5 vials (30 µL)	1 vial (30 µL)	5 vials (30 µL)	2-8°C	6 months from date of receipt
iQue® Counting Beads	1 bottle (2 mL)	5 bottles (2 mL)	1 bottle (5.4 mL)	5 bottles (5.4 mL)	2-8°C	

Note: A product guide and a USB key with assay templates are also included in the kit package.

Background

The iQue® Cell Count and Viability Kit is designed for reproducible quantitative analysis of cell count and viability to screen and profile cells. This assay is optimized to run on the iQue® platform with BR and VBR configurations combining high throughput sampling and flow cytometry detection capabilities. It provides fast analysis of absolute cell count and viability across a large linear range from a variety of non-adherent cell lines with a streamlined workflow from cell labeling to analysis. The kit includes validated reagents and preset templates for gating strategy and analysis. Using customer-provided test cells, the kit identifies live cells and determines sample density in a no-wash assay. This kit is designed for research purposes only.

Recommended Use

The iQue® Cell Count and Viability Kit is used to identify and determine cell density in non-adherent cell lines by flow cytometry. Samples can be cultured cells or immediately thawed frozen cells. Please follow the appropriate protocols to culture and thaw cells.

This kit has not been optimized for use in adherent cell lines. This assay has been validated using Jurkat, Raji, Ramos, PBMCs, purified human Monocytes, and CHO-S as cell sample lines.

Workflow

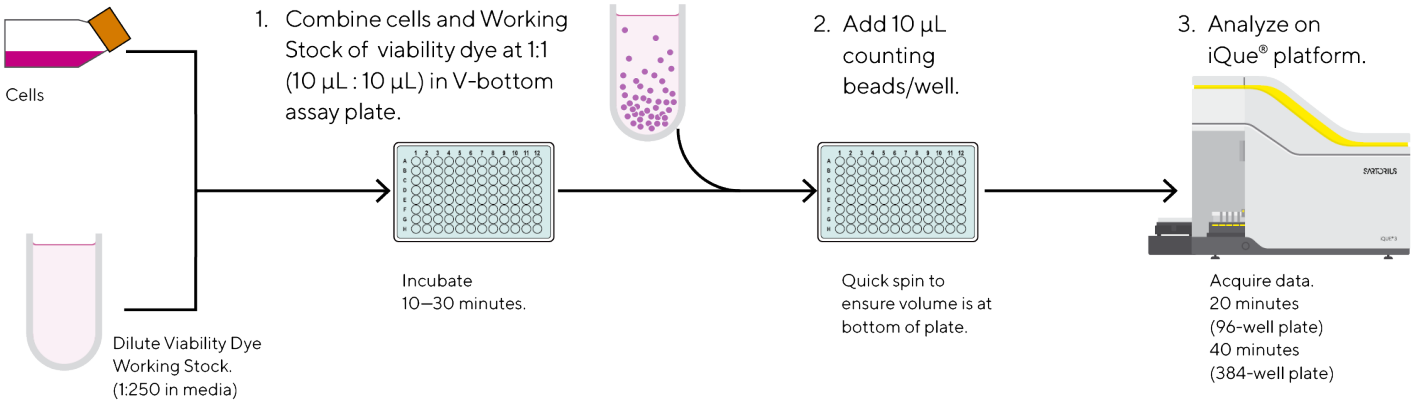

Figure 1: iQue® Cell Count and Viability Kit workflow.

Protocol and Procedure for 96 and 384-Well Plates

1. Prepare 2X Viability Dye Working Stock

1.1 Allow iQue® Live Viability (R/Red) Dye and iQue® Counting Beads to come to room temperature prior to assay.

1.2 Dilute iQue® Live Viability (R/Red) Dye into cell culture medium at a dilution factor of 1:250.

2. Perform Assay

2.1 Combine cell samples and iQue® Live Viability (R/Red) Dye working stock at 1:1 ratio in a V-bottom assay plate **(10 µL cells and 10 µL working stock dye)**.

2.2 Give the assay plate a quick spin (300 x g, 5 seconds) and brief shake (2000 RPM, 20 seconds) to ensure that all samples are thoroughly mixed at the well bottom.

2.3 Incubate samples for 10-30 minutes at room temperature, protect from light.

Note: Incubation for longer than 30 minutes is not recommended, which will decrease the separation between live and dead cells in some cell types.

2.4 Add 10 µL iQue® Counting beads to each sample well on the assay plate. The beads should be vortexed prior to use.

2.5 Give the assay plate a quick spin (300 x g, 5 seconds) and brief shake (2000 RPM, 20 seconds) to ensure that all samples are thoroughly mixed at the well bottom.

3. Plate Acquisition and Data Analysis

3.1 Launch iQue Forecyt® Software.

3.2 Import the provided experiment template (included on USB key in the kit package).

3.3 Create a New Experiment using the provided template.

3.4 In the Design section, assign wells to Sample. In the Series subsection, edit/add Series to ensure proper plate layout.

3.5 In the Protocol section, adjust Sample Order if plate layout requires (horizontal instead of vertical).

3.6 Click "Run" on the Controller window to acquire the plate.

3.7 Use the template to gate Beads, and All Cells → Live Cells (see Figure 2).

3.8 Viability (%) is calculated from Live Cell population as a percent of All Cells. Cell density is automatically calculated from the known bead density x (cell count/bead count), which is pre-set in the template.

Example Data

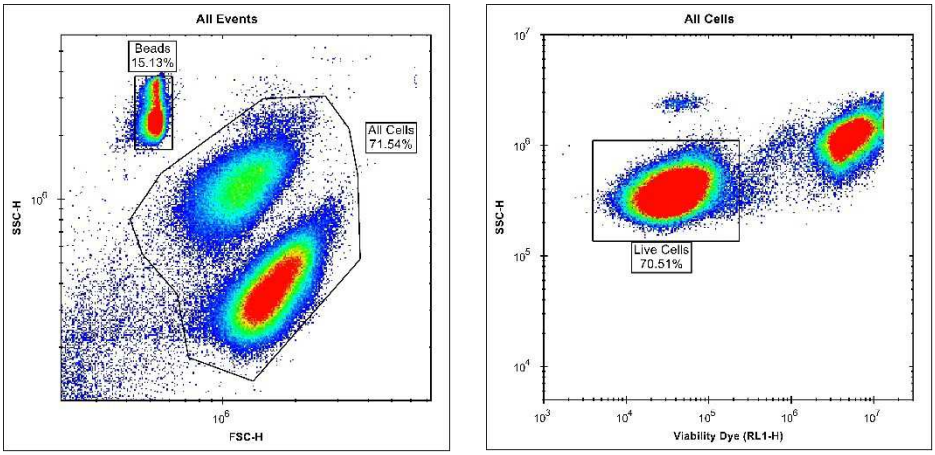

Figure 2: iQue® Cell Count and Viability Kit gating for Live Cells.

Quick Guide

1. Reagent preparation

- [ ] Allow included kit reagents to come to Room Temperature (RT) prior to assay

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- [ ] Prepare Working Stock of iQue® Live Viability (R/Red) Dye by diluting dye in cell culture medium at a dilution factor of 1:250

2. Assay protocol

- [ ] Add **10 µL/well** Cell Samples to V-bottom assay plate

↓

- [ ] Add **10 µL/well** Working Stock Live Viability dye
  Quick Spin|Brief Shake*
  Incubate RT, 10 - 30 minutes, Dark

↓

Start time _____ *Stop time* _____

- [ ] Add **10 µL/well** iQue® Counting Beads
  Quick Spin|Brief Shake*

↓

- [ ] Acquire data.

Notes

* Quick Spin|Brief Shake: 300 x g, 5 seconds | 2000 RPM, 20 seconds

Sales and Service Contacts

For further contacts, visit
www.sartorius.com

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