QUANTOM™ Viable Cell Staining Kit

Q13502

Storage

Room temperature

- ✓Q13001 QUANTOM™ Cell Loading Buffer I
- ✓Q13003 Dimethyl Sulfoxide
- ✓Q13004 QUANTOM™ Viable Cell Dilution Buffer

-20°C in the dark

- ✓Q13201 QUANTOM™ Viable Cell Staining Dye

Product Description

The QUANTOM™ Viable Cell Staining Kit is used to label live bacterial cells for counting with the QUANTOM Tx™ Microbial Cell Counter.

The QUANTOM™ Viable Cell Staining Dye is a less toxic Calcein AM derivative that has better cellular retention and efficiently labels difficult-to-stain cells such as live bacterial cells. In live cells, intracellular esterases cleave the acetoxymethyl (AM) group, producing the membrane-impermeable fluorescent Calcein. The optimal excitation/emission wavelength is 496/520 nm. QUANTOM™ Viable Cell Dilution Buffer enhances the fluorescence signal of cells stained with QUANTOM™ Viable Cell Staining Dye and is used to wash or dilute bacterial cells prior to staining. QUANTOM™ Cell Loading Buffer I is a gradient medium used for the even distribution and sedimentation of bacterial cells in QUANTOM™ M50 Cell Counting Slides.

Directions for Use

Stock Preparation

1. Add 660 µL Dimethyl sulfoxide (DMSO) to the vial of QUANTOM™ Viable Cell Staining Dye. Mix thoroughly.
2. Aliquot and store at -20°C for up to 3 months.

   NOTE: The dye may spontaneously hydrolyze in solution.
   NOTE: Store in powder form for up to 2 years at -20°C.
3. Thaw at 4°C or on ice before use.

Cell Staining & Counting

1. Dilute cell suspensions as necessary with QUANTOM™ Viable Cell Dilution Buffer.

   NOTE: Stain cells after dilution or resuspension with QUANTOM™ Viable Cell Dilution Buffer. PBS or water will decrease labeling efficiency. Culture media or sera may have esterase activity and lead to decreased viable cell staining and high background fluorescence.
2. *(Optional)* Wash cells with QUANTOM™ Viable Cell Dilution Buffer.
3. Mix:
   2 µL QUANTOM™ Viable Cell Staining Dye
   10 µL cell sample
4. Incubate at 37°C for 20 minutes to 3 hours in the dark. 30 minutes is recommended for most bacterial cells.
5. Add 8 µL QUANTOM™ Cell Loading Buffer I. Mix gently so as not to create bubbles.
6. Load 5-6 µL into a QUANTOM™ M50 Cell Counting Slide.
7. Centrifuge the sample slide at 300 RCF for 5-30 minutes in a QUANTOM™ Centrifuge. 10 minutes is recommended for most bacterial cells.

   NOTE: Centrifugation force and time may need to be optimized according to cell size to distribute cells along one focal plane.
8. Count the sample with a QUANTOM Tx™ with the light intensity level set to 9 for most bacterial cells.

Disclaimer

This product is for research use only.
Please consult the material safety data sheet for information regarding hazards and safe handling practices.

Additional information is available on our website at www.logosbio.com.

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