molecular probes® by life technologies™

Tali® Viability Kit – Dead Cell Red

for use with Tali® Assays: Viability, Green + Red

Catalog no. A10786

Table 1 Contents and storage

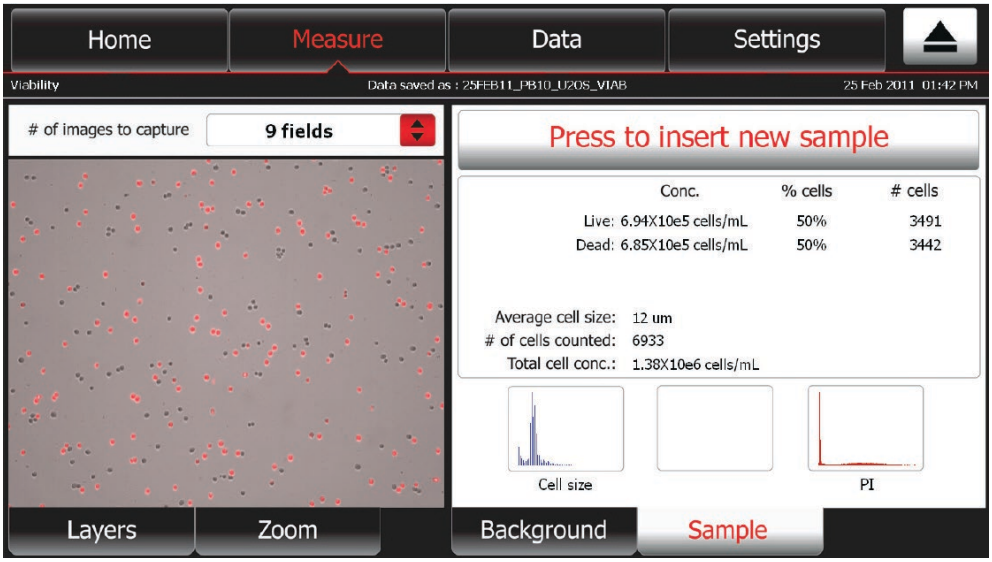
Material	Amount	Concentration	Storage	Stability
Tali® Dead Cell Red (Propidium iodide) (Component A)	100 µL	100 µg/mL in water	• 2–25°C • Protect from light • Do not freeze	When stored as directed, the product is stable for at least 6 months.
Number of assays: Sufficient material is supplied for 100 assays of 100 µL each.				
Approximate fluorescence excitation/emission maxima: Propidium iodide: 535/617 in nm, bound to DNA.				

Introduction

The Tali® Dead Cell Red reagent is a ready-to-use solution of propidium iodide (PI), a cell-impermeant fluorogenic DNA-binding dye used for identifying necrotic cells. PI is impermeant to live cells, but easily enters dead cells and stains them with red fluorescence upon binding to nucleic acids, which enhances its fluorescence 20- to 30-fold. The Tali® Dead Cell Red reagent can be used to identify the dead cells in a population of unstained cells or in a population of cells expressing green fluorescent proteins such as GFP or stained with green fluorescent dyes such as Alexa Fluor® 488.

To determine the number and proportion of viable and dead cells in a sample using the Tali® Viability Kit – Dead Cell Red, perform the Tali® Viability or the Tali® Green + Red assay on the Tali® Image-Based Cytometer. The Tali® Image-Based Cytometer captures up to 20 images (i.e., fields of view) per sample, automatically analyzes the images with sophisticated digital image-based cell counting and fluorescence detection algorithms, and presents the results of the analysis in the Sample tab (Figure 1, page 2). The data from the analysis, including the image files, can then be downloaded to a USB flash drive immediately after the assay and transferred to a computer for sample comparisons.

Figure 1 Example of a Tali® Viability Assay using Tali® Viability Kit – Dead Cell Red. The Sample tab shows the concentration, the relative proportion, and the number of live and dead cells. The image window shows the captured fields of view, where the dead cells stained with red fluorescence are clearly distinguishable from the live cells that do not fluoresce. For detailed instructions on using the Tali® Image-Based Cytometer, refer to the user guide supplied in the Tali® Image-Based Cytometer USB Drive. The user guide is also available for downloading www.lifetechnologies.com/tali.



Before You Begin

Materials Recommended but Not Provided

Tali® Cellular Analysis Slides (Cat. nos. T10794, T10795)

Caution

Propidium iodide is a potential mutagen; use appropriate precautions when handling this reagent.

Experimental Protocol

Follow the instructions below to stain your cells with Tali® Dead Cell Red stain. For detailed instructions on using the Tali® Image-Based Cytometer, refer to the user guide supplied in the Tali® Image-Based Cytometer USB Drive. The user guide is also available for downloading at **www.lifetechnologies.com/tali**. The recommended sample concentration range for the Tali® Image-Based Cytometer is 1×10^5 to 1×10^7 cells/mL; however, the sample concentration does not need to be exact to perform an assay.

1. Harvest your cells. You may perform the staining directly in cell culture medium or you may centrifuge the cells and and wash them with PBS prior to staining.

2. Transfer 100 µL of the cell the sample to a microcentrifuge tube and add 1 µL of Tali® Dead Cell Red reagent (Component A). Mix well by briefly vortexing.

3. Incubate the Tali® Dead Cell Red reagent and cell mixture at room temperature in the dark for 1–5 minutes.

4. Load 25 µL of the stained cells into a Tali® Cellular Analysis Slide by pipetting the sample at an angle of approximately 80° into the half moon-shaped sample loading area. The sample is loaded into the chamber through capillary action. Take care to avoid forming bubbles in the sample or to cause back splatter.

5. Insert the slide into the slide port of the Tali® Image-Based Cytometer until it stops. Do not forcefully push the slide any further.

6. Touch **Cell Health,** and then **Viability** on the Home screen of the Tali® Image-Based Cytometer.

7. Name the sample series, if desired.

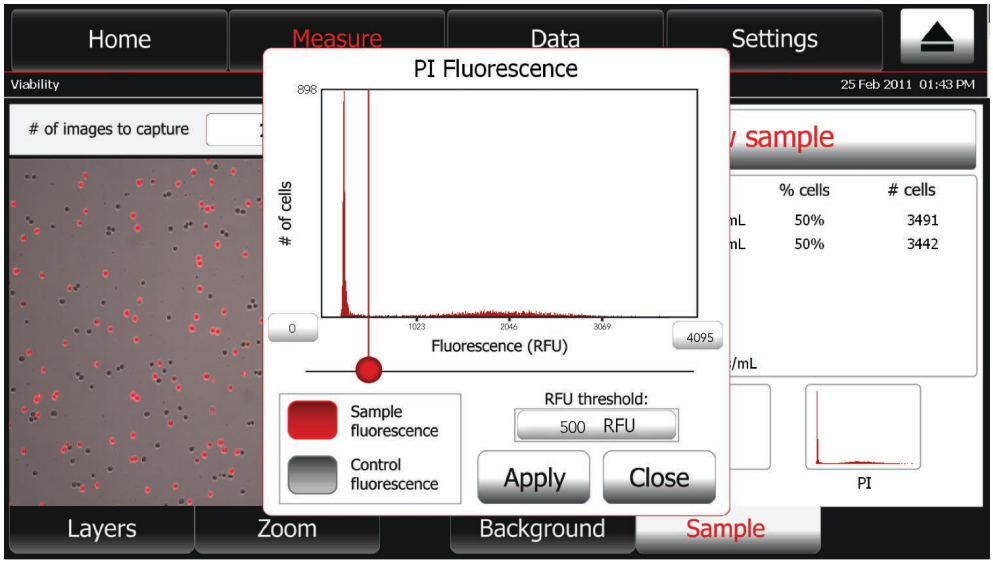
8. Touch **Press to insert new sample**; the slide will automatically be pulled into the instrument.

9. When prompted, focus your cells using the image adjustment (focus) knob on the right side of the instrument.

10. Specify the number of fields of view to capture using the **# of images to capture** drop-down menu, and then touch **Press to run sample**. The Tali® Image-Based Cytometer will automatically capture and analyze the images of your sample, and present the results of the analysis in the analysis window.

    Note: Biological molecules found within cells fluoresce upon excitation and result in background fluorescence. Because the Tali® Image-Based Cytometer is a highly sensitive instrument, this background fluorescence is detected and displayed as a peak closest to the 0 RFU (relative fluorescence unit) value. To eliminate the background fluorescence from your measurements, adjust the threshold to exclude this peak.

11. On the Sample tab, touch the appropriate **histogram thumbnail** and set the threshold by moving the blue button on the slider bar. The Tali® Image-Based Cytometer automatically re-analyzes the data and updates the results in the Sample tab. The example below shows the threshold pop-up window for PI fluorescence.



Product List Current prices may be obtained from our website or from our Customer Service Department.

Cat no.	Product Name	Unit Size
A10786	Tali® Viability Kit – Dead Cell Red (for use with Tali® Assays: Viability, Green + Red)	100 assays
Related Products		
A10787	Tali® Viability Kit – Dead Cell Green (for use with Tali® Assays: Green, Green + Red)	100 assays
A10788	Tali® Apoptosis Kit – Annexin V Alexa Fluor® 488 and Propidium Iodide	1 kit
A10794	Tali® Cellular Analysis Slides, 50 slides	1 each
A10795	Tali® Cellular Analysis Slides, 500 slides	1 each
A10798	Tali® Cell Cycle Kit	50 assays

Purchaser Notification

Corporate Headquarters
5791 Van Allen Way
Carlsbad, CA 92008
USA
Phone: +1 760 603 7200
Fax: +1 760 602 6500
Email: techsupport@lifetech.com

European Headquarters
Inchinnan Business Park
3 Fountain Drive
Paisley PA4 9RF
UK
Phone: +44 141 814 6100
Toll-Free Phone: 0800 269 210
Toll-Free Tech: 0800 838 380
Fax: +44 141 814 6260
Tech Fax: +44 141 814 6117
Email: euroinfo@invitrogen.com
Email Tech: eurotech@invitrogen.com

Japanese Headquarters
LOOP-X Bldg. 6F
3-9-15, Kaigan
Minato-ku, Tokyo 108-0022
Japan
Phone: +81 3 5730 6509
Fax: +81 3 5730 6519
Email: jpinfo@invitrogen.com

Additional international offices are listed at **www.lifetechnologies.com**

These high-quality reagents and materials must be used by, or directly under the supervision of, a technically qualified individual experienced in handling potentially hazardous chemicals. Read the Safety Data Sheet provided for each product; other regulatory considerations may apply.

Obtaining Support
For the latest services and support information for all locations, go to **www.lifetechnologies.com**.

At the website, you can:

- Access worldwide telephone and fax numbers to contact Technical Support and Sales facilities
- Search through frequently asked questions (FAQs)
- Submit a question directly to Technical Support (**techsupport@lifetech.com**)
- Search for user documents, SDSs, vector maps and sequences, application notes, formulations, handbooks, certificates of analysis, citations, and other product support documents
- Obtain information about customer training
- Download software updates and patches

SDS
Safety Data Sheets (SDSs) are available at **www.lifetechnologies.com/sds**.

Certificate of Analysis
The Certificate of Analysis provides detailed quality control and product qualification information for each product. Certificates of Analysis are available on our website. Go to **www.lifetechnologies.com/support** and search for the Certificate of Analysis by product lot number, which is printed on the product packaging (tube, pouch, or box).

Limited Product Warranty
Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at **www.lifetechnologies.com/termsandconditions**. If you have any questions, please contact Life Technologies at **www.lifetechnologies.com/support**.

Disclaimer
LIFE TECHNOLOGIES CORPORATION AND/OR ITS AFFILIATE(S) DISCLAIM ALL WARRANTIES WITH RESPECT TO THIS DOCUMENT, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. TO THE EXTENT ALLOWED BY LAW, IN NO EVENT SHALL LIFE TECHNOLOGIES AND/OR ITS AFFILIATE(S) BE LIABLE, WHETHER IN CONTRACT, TORT, WARRANTY, OR UNDER ANY STATUTE OR ON ANY OTHER BASIS FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING BUT NOT LIMITED TO THE USE THEREOF.

Limited Use Label License: Research Use Only
The purchase of this product conveys to the purchaser the limited, non-transferable right to use the purchased amount of the product only to perform internal research for the sole benefit of the purchaser. No right to resell this product or any of its components is conveyed expressly, by implication, or by estoppel. This product is for internal research purposes only and is not for use in commercial services of any kind, including, without limitation, reporting the results of purchaser's activities for a fee or other form of consideration. For information on obtaining additional rights, please contact **outlicensing@lifetech.com** or Out Licensing, Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, California 92008.

18 July 2013

life technologies™