

## TraKine™ Pro Live-cell Lyso-traker kit (Red Fluorescence)

Cat #: KTC4210

Size: 50 T/250 T

	<b>Live-cell Lyso-traker kit (Red Fluorescence)</b>		
<b>REF</b>	<b>Cat #:</b> KTC4210	<b>LOT</b>	<b>Lot #:</b> Refer to product label
	<b>Maximum Ex/Em:</b> 651/672 nm		<b>Color:</b> Red
	<b>Applicable samples:</b> Mammalian Live Cells (U-2 OS have been tested)		
	<b>Storage:</b> Store at -20°C for 12 months, protected from light		

### Assay Principle

Lyso Red is a fluorescent probe with Red fluorescence that can specifically label lysosomes in living mammalian cells. It has strong water solubility and pH stability; its maximum excitation wavelength is 651 nm, and its maximum emission wavelength is 672 nm (see Figure 1 for details and excitation/emission spectra).

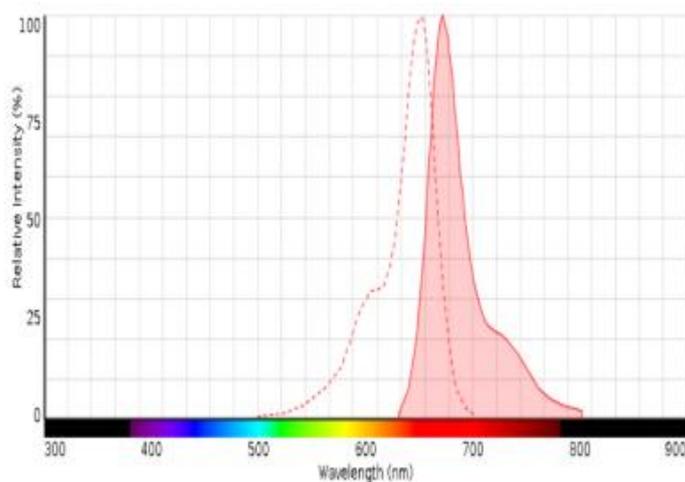


Figure 1. Lyso Red maximum excitation/emission spectra

### Materials Supplied and Storage Conditions

Kit components	Size		Storage conditions
	50 T	250 T	
Lyso Red (1 mM)	25 µL	125 µL	-20°C, protected from light
Buffer A (200 µM)	40 µL	200 µL	-20°C, protected from light

## Materials Required but Not Supplied

- Super-resolution microscopy, laser scanning confocal microscopy
- PCR tubes, precision pipettes, disposable pipette tips
- Glass bottom dishes or transparent flat bottom orifice plate
- Cell culture media with 10% and 0% FBS
- Phosphate-buffered saline (PBS), pH 7.4

## Reagent Preparation

**Lyso Red (1 mM):** Ready to use as supplied. Stored at -20°C and protected from light after aliquoting.

**Buffer A (200 μM):** Ready to use as supplied. Stored at -20°C and protected from light after aliquoting.

## Assay Procedure

### A Lyso Red Staining Solution:

For 24 or 48 well plates, the amount of Lyso Red Staining Solution required per well is 200 μL and 100 μL, respectively; The amount of Lyso Red Staining Solution required for 15 mm and 20 mm confocal imaging dishes was 100 μL and 200 μL, respectively. The preparation method of 100 μL Staining Solution is as follows: add 1 μL Lyso Red, 1.5 μL Buffer A in 97.5 μL cell culture media with 0% FBS in PCR tube, pipet up and down to mix thoroughly. (Other volumes of incubation solution can be prepared in accordance with this ratio)

**Note: Cell culture media with 0% FBS is required for incubation solution preparation; Cells should be completely covered by incubation solution when staining. In addition, Lyso Red working concentration is 10 μM, Buffer A working concentration is 1-2 μM. Users can adjust the amount of incubation solution according to the specific situation.**

### B Lyso Red incubation conditions and time

1. Cells were seeded on glass bottom dishes at a density of  $8 \times 10^4$  cells per dish in growth medium. After 30-48 h incubation, the cells were 70-90% confluent.
2. Prepare the Lyso Red Staining Solution required in PCR tubes refer to step A.
3. Discard the culture media, wash your dishes with PBS once, and then wash with cell culture media with 0% FBS once.
4. Discard cell culture media with 0% FBS, quickly dropwise Lyso Red Staining Solution onto the glass bottom, Incubate the cells in a 5% CO<sub>2</sub> atmosphere at 37°C for 1 h.
5. Remove the staining solution, PBS wash with 2-3 times, then add cell culture media with 0% FBS, incubate the cells in a 5% CO<sub>2</sub> atmosphere at 37°C for 15 min.
6. Remove the Cell culture media, PBS wash with 2-3 times, then add cell culture media with 10% FBS, incubate the cells in a 5% CO<sub>2</sub> atmosphere at 37°C for 15 min.
7. Finally, Image cells by microscope.

## Precautions

1. To avoid cross-contamination, change pipette tips between sample additions, and between reagent additions.
2. Make sure the pipette tips and PCR tubes were sterilized at high temperature and pressure. Do all experiments in a sterile environment and avoid light as much as possible.
3. Fluorescence quenching occurs in all fluorescent dyes. Please image as soon as possible after incubation and rinsing.
4. Incubation and rinsing time are the most suitable time after the test, in order to ensure the marking effect, do not change.

## Typical Data

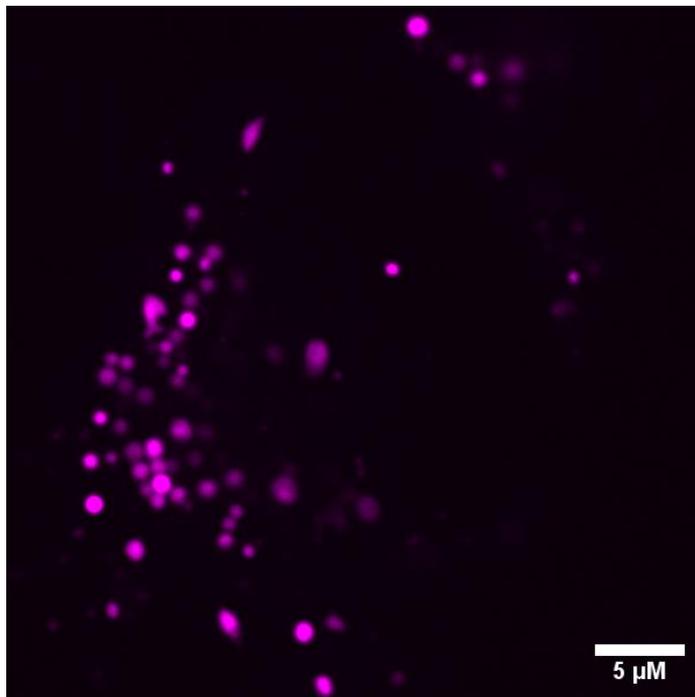


Figure 2. Lyso Red labels lysosomal structures within of living U-2 OS cells. Scale bars: 5  $\mu$ M.

## Recommended Products

Catalog No.	Product Name
KTC4100	TraKine™ Pro Live-cell Tubulin-traker kit (Green Fluorescence)
KTC4110	TraKine™ Pro Live-cell Tubulin-traker kit (Red Fluorescence)
KTC4200	TraKine™ Pro Live-cell Lyso-traker kit (Green Fluorescence)

## Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.