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# Mito Red Kit

## 1 Components

| Component | HY-KD1029-50T |
|---|---|
| Mito Red | 1 mM × 50 μL |

## 2 Introduction

Mito Red is a red-fluorescent fluorescent probe that specifically labels mitochondria in living mammalian cells and is highly water-soluble and pH-stable; it has a maximum excitation wavelength of 550 nm and a maximum emission wavelength of 575 nm. The MCE Mito Red kit enables the specific labeling of mitochondria in living cells, with stable fluorescence, and is compatible with labeling in fixed cells.

## 3 Characteristics

Maximum excitation wavelength: 550 nm
Maximum emission wavelength: 575 nm
Color: red
Subcellular structural localization: mitochondria

## 4 Self-contained reagents

1. Serum-free cell culture medium
2. PBS buffer

## 5 Protocol

### Preparation of Mito Red working solution

1. The working concentration of Mito Red is as follows:

| Component | Working Concentration |
|---|---|
| Mito Red | 5 μM |

2. Serum-free cell culture medium is required for the preparation of the working solution. For 24- and 48-well plates, the amount of Mito Red working solution per well is 200 μL and 100 μL, respectively; for 15 mm and 20 mm confocal imaging dishes, the amount of Mito Red working solution is 100 μL and 200 μL, respectively. The following table can be used to prepare Mito Red working solution.

| Working Solution | Mito Red | Serum-free medium |
|---|---|---|
| 100 μL | 0.5 μL | 99.5 μL |
| 200 μL | 1 μL | 199 μL |

Note: The working solution should cover the cells completely when staining, and the amount of working solution can be adjusted proportionally according to the specific situation.

### Mito Red Incubation Procedure

1. Prepare the cells.
2. Prepare the working solution for incubation.
3. Wash the cells growing in the well plate or confocal dish with appropriate amount of PBS, and then take appropriate amount of serum-free medium to rinse the cell surface once.
4. Add the working solution and incubate the cells with the working solution for 1 h.
5. Take the appropriate amount of PBS and wash 3 times, add the appropriate amount of serum-free medium and leave for 15 min.
6. Take appropriate amount of PBS and wash 3 times, replace with serum cell culture medium and leave for 15 min.
7. Imaging.

## 6 Storage

-20°C, 1 year

Keep away from light

## 7 Precautions

1. In order to ensure cell activity and labeling effect, the cell confluence should reach 70%-90% before incubation.
2. The optimal incubation environment for the probe is 37°C, 5% $CO_2$ cell culture incubator.
3. Fluorescent dyes are subject to fluorescence quenching, so please image as soon as possible after incubation and rinsing.
4. This product is limited to scientific research by professionals and should not be used for clinical diagnosis or treatment, food or medicine.
5. For your safety and health, please wear lab coat and disposable gloves.