



# JC-1 Mitochondrial Membrane Potential Assay Kit

## Product Information

### Cat.No.

Kit-0487

### Product Overview

JC-1 Mitochondrial Membrane Potential Assay Kit is a fluorescence-based method for tracing the behavior of mitochondria.

### Description

$\Delta\Psi_M$  is an important parameter of mitochondrial function and has been used as an indicator of cell health. Variation of  $\Delta\Psi_M$  have been previously studied using cationic dyes such as rhodamine-123 (Rh123) and DiOC6. More recently, a cytofluorimetric, lipophilic cationic dye, 5,5',6,6'-tetrachloro-1,1',3,3'-tetraethylbenzimidazolylcarbocyanine iodide (JC-1), has been developed. JC-1 has advantages over other cationic dyes in that it enters the mitochondria and changes its fluorescent properties based on the aggregation of the probe. In healthy cells with high  $\Delta\Psi_M$ , JC-1 forms complexes known as J-aggregates with intense red fluorescence. However, in cells with low  $\Delta\Psi_M$ , JC-1 remains in the monomeric form, which exhibits green fluorescence. The higher the ratio of red to green fluorescence, the higher the polarization of the mitochondrial membrane.

### Usage

For research use only (RUO)

### Storage

JC-1 Reagent -20°C Cell-Based Assay Buffer Tablet Room Temperature

### Kit Components

JC-1 Reagent 500  $\mu$ L Cell-Based Assay Buffer Tablet 3 tablets