GORYO CHEMICAL

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For research use only

Kyoto Probe 1 (KP-1)

Table 1. Product information

Catalog no.	Product name	Amount	Storage upon receipt	Stability
GC7001-01	**Kyoto Probe 1 (KP-1)**	10 μg × 5	Store under -20°C, desiccate and protect from light. Unrecommend storing DMSO solution of dye	1 year (unopened and stored as described)
GC7001-02		10 μg × 10		

1. Introduction

■ About KP-1

KP-1 is a fluorescent imaging probe that detects live human pluripotent stem cells distinguishing them from the detection of differentiated cells. **KP-1** is permeable through the cell membrane and when added to cells in culture media localize on the mitochondrial membrane. **KP-1** is considered to be eliminated from the inside of the differentiated cells by the ABC transporters which do not work in the pluripotent stem cells.

2. Example of live cell imaging with human iPS cells

■Procedure

① Plate human iPS cells on the layer of the SNL feeder cells. Colonies of iPS cell are formed about 5 days after the plating.
Caution : Glass bottom dish etc. are recommended as cell culture dish, because it shows a low autofluorescence.

② Dissolve 10 μg of **KP-1** (1 vial) in 4.8 μL of DMSO to prepare 5 mM stock solution.
Caution : You are able to dissolve **KP-1** in PBS (pH7.4) at the concentration of 0.25 mg/mL or below, if you do not want to use DMSO.

③ Dilute the DMSO stock solution with iPS culture medium to 2 μM cell stain solution.

④ Add stain solution to the dish and incubate for 3 hours.

⑤ Replace the buffer to the iPS culture medium or HBSS and observe the cells using a fluorescence microscope.

■Fluorescent observation

515 nm is suited for excitation wavelength. The wavelength of maximum emission is around 529 nm.

■Storage

Probes are shipped under conditions of N_2 atmosphere, dry and in frozen state. After receipt, store under −20°C, desiccate and protect from light. We recommend using up DMSO solution of dye at once.

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