updated: Jan. 31, 2017

GORYO CHEMICAL

For research use only

Kyoto Probe 1 (KP-1)

Table 1. Product information

品番	品名	容量	保存	安定性
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)
GC7001-02		10 μg × 10		

1. Introduction

■ About KP-1

KP-1 is a fluorescent imaging probe that detects live human pluripotent stem cells in distinction from for detection of differentiated cells. **KP-1** is permeable through the cell membrane and localize on the mitochondrial membrane by adding the probe to the culture medium. **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 solve **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 Replacing the buffer to the iPS culture medium or HBSS and observe the cells using a fluorescence microscopy.

■Fluorescent observation

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

■Storage

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

GORYO Chemical, Inc.
EAREE BUILDING 5F 35-100, Nishi-18, Kita-8 Chuo-ku, Sapporo, 060-0008, JAPAN
TEL: +81-11-624-5860 FAX: +81-11-351-1822
URL: https://www.goryochemical.com/