

**Product Name:** Kyoto Probe-1

**Catalog No.:** 7419

**Batch No.:** 1

CAS Number: 2088021-81-0

IUPAC Name: 9-(4-Fluorophenyl)-3-imino-3*H*-xanthen-6-amine trifluoroacetate

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>13</sub>FN<sub>2</sub>O.CF<sub>3</sub>CO<sub>2</sub>H

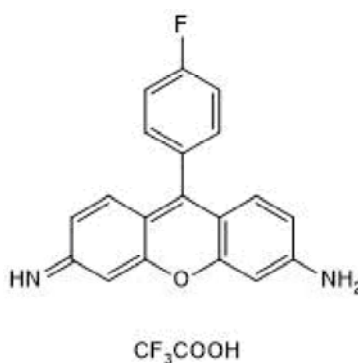
**Batch Molecular Weight:** 418.35

**Physical Appearance:** Pink solid

**Solubility:** DMSO to 100 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 97.8% purity at 254 nm

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**UV Spectrum:** Consistent with structure

**λ<sub>max</sub>:** 515 nm (EtOH)

**λ<sub>ex</sub>:** 511 nm (EtOH)

**λ<sub>em</sub>:** 529 nm (EtOH)

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

Kyoto Probe-1 distinguishes between undifferentiated iPS/ES cells and differentiated cells, so may be used for monitoring pluripotency during hESC or iPSC maintenance. Selectivity of labeling is due to ATP-binding cassette transporters ABCB1 and ABCG2 - these mediate efflux of Kyoto Probe-1 and are expressed in differentiated cells, but are repressed in hiPSC and hESC. Kyoto Probe-1 distinguishes between SSEA-4-positive hESCs and human early hematopoietic cells expressing CD45, CD235, CD41a, or CD43 in flow cytometry experiments, making it a valuable tool for studying early hematopoiesis. The product also distinguishes between hiPSCs and hiP... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>19</sub>H<sub>13</sub>FN<sub>2</sub>O.CF<sub>3</sub>CO<sub>2</sub>H

Batch Molecular Weight: 418.35

Physical Appearance: Pink solid

**Minimum Purity:** ≥95%

**Batch Molecular Structure:**



**References:**

**Miyagi-Shiohira et al** (2020) Kyoto probe-1 reveals phenotypic differences between mouse ES cells and iTS-P cells. *Sci.Rep.* **10** 18084. PMID: 33093580.

**Mao et al** (2017) A synthetic hybrid molecule for the selective removal of human pluripotent stem cells from cell mixtures. *Angew.Chem.Int.Ed.Engl.* **56** 1765. PMID: 28067441.

**Hirata et al** (2014) A chemical probe that labels human pluripotent stem cells. *Cell Rep.* **6** 1165. PMID: 24613351.

**Storage:** Store at -20°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 100 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**Licensing Information:**

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