

aceRNA Technologies Co., Ltd.

# iPSC detector RNA Switch™

## PROTOCOL

Product name	Cat. No.	Size***	Storage
iPSC detector RNA Switch™	P-0003	9 µg	-80°C

\*\*\* 0.5 µg/µL

### Additional materials required

- 24-well tissue culture plates
- 1.5 mL microcentrifuge tubes (RNase/DNase free, Sterile)
- Lipofectamine MessengerMAX™ Transfection Reagent (ThermoFisher)
- Reference iRFP670 mRNA: various fluorescents can be used except EGFP  
mCherry mRNA (TriLink) is recommended
- Control detector RNA Switch™ (P-0001)

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**iPSC cell detection using iPSC detector RNA Switch™**

The following procedure is for the transfection of cell populations containing human iPS cells with iPSC detector RNA Switch™ in one well of a 24-well plate. Transfection efficiency and mRNA expression can be influenced by the cell type being transfected.

RNA Switch™ is synthetic mRNA. Therefore, transfection should be performed in a RNase-free working-environment and mRNA should be diluted and aliquoted in RNase-free Water. Store them at -80°C.

1. Plate cell population containing human iPS cells in a 24-well tissue culture plate at a density of  $2.0 \sim 3.0 \times 10^5$  cells/well and incubate the cells at 37°C and 5% CO<sub>2</sub> 24 h prior to transfection.

2. 24 h after seeding, aspirate the medium and add 0.5 mL of fresh medium (StemFit, AK02N, Ajinomoto) to wells and incubate the cells at 37°C and 5% CO<sub>2</sub> 1 to 2 hrs before transfection.

3. Thaw Control detector RNA Switch™ (P-0001), iPSC detector RNA Switch™, and reference iRFP670 mRNA on ice or at 4°C. Transfect the cells with 0.1 µg of Control detector RNA Switch™ or iPSC detector RNA Switch™ mixed with 0.1 µg of reference iRFP670 mRNA using 1 ~ 1.5 µL of Lipofectamine MessengerMAX™ Transfection Reagent (ThermoFisher) according to the manual. Incubate the cells at 37°C and 5% CO<sub>2</sub>.

4. 4 h after transfection, discard the medium and add 0.5 mL of fresh medium. Incubate the cells at 37°C and 5% CO<sub>2</sub>.

5. Next day, fluorescence expression can be imaged by image analyzer and harvested for FACS analysis.

- Control detector RNA Switch™: EGFP
- iPSC detector RNA Switch™: EGFP
- Reference mRNA: iRFP670

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