

# TaqMan® hPSC Scorecard™ Panel

Cat. nos. A15870, A15871, A15872, A15876

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Detailed protocol is available at [lifetechnologies.com/manuals](https://lifetechnologies.com/manuals).

For additional product information and resources, visit [lifetechnologies.com/scorecard](https://lifetechnologies.com/scorecard).

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# TaqMan® hPSC Scorecard™ Panel Workflow

Detailed protocol is available at [www.lifetechnologies.com/manuals](http://www.lifetechnologies.com/manuals).

## ESC/iPSC Sample → RNA Isolation → DNase Treatment → cDNA Preparation

Undifferentiated ESC/  
iPSC

Differentiated ESC/  
iPSC

- Embryoid bodies (week 1) or
- Directly differentiated cells

**Sample requirements:**

>5 × 10<sup>5</sup> cells/sample

TRIzol® Organic Phase  
Extraction

1. Harvest sample with TRIzol® reagent (Cat. no. 15596).
2. Extract RNA using chloroform.
3. Precipitate RNA in 100% isopropanol
4. Wash RNA in 75% ethanol.
5. Resuspend RNA in 20–50 µL RNase-free water.

**Sample requirements:**

1 mL TRIzol® reagent per 6-cm culture dish

DNA-free™ Kit (optional)  
(Cat. no. AM1906)

1. Remove contaminating DNA from the RNA sample.
2. Measure A<sub>260</sub> and A<sub>280</sub> to determine total RNA amount and quality.

**[RNA] (µg/mL):**

A<sub>260</sub> × 40 × dilution factor

**Recommended ratio:**

A<sub>260</sub>/A<sub>280</sub> = ~2.0

High Capacity cDNA RT  
Kit with RNase Inhibitor  
(Cat. no. 4374966)

8 reverse transcription (RT) reactions per RNA sample:

1. Dilute 1 µg RNA in 225 µL RNase-free water and 225 µL 2× RT master mix.
2. Aliquot 50 µL RT reaction mix per well or PCR tube.
3. Perform RT reaction using the following conditions:

25°C - 10 min  
37°C - 120 min  
85°C - 5 min  
4°C - hold

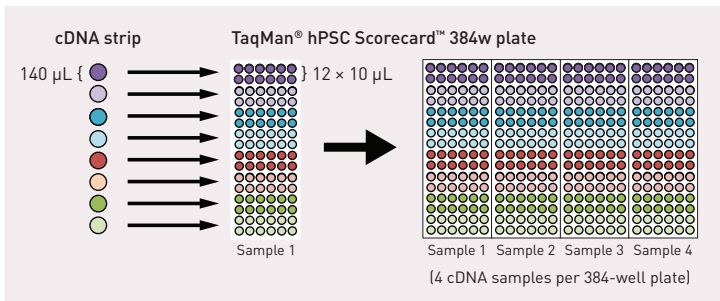
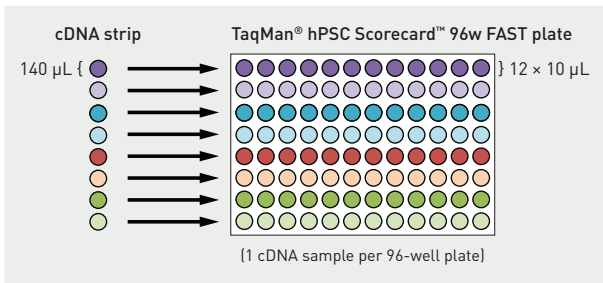
## TaqMan® qRT-PCR

hPSC Scorecard™ Panel  
Experiment Type:  
Standard Curve

**qPCR Setup:**

1. Add 20 µL water and 70 µL 2× master mix per RT reaction (i.e., cDNA sample; total final V = 140 µL).
  - 96-wells: TaqMan® Fast Advanced Master Mix (Cat. no. 4444557)
  - 384-wells: TaqMan® Gene Expression Master Mix (Cat. no. 4369016)
2. Load 10 µL per well into hPSC Scorecard™ plate (see loading guide below).
3. Run plate (see cycling parameters below).

## TaqMan® hPSC Scorecard™ Panel loading guide



## Cycling parameters

**TaqMan® hPSC Scorecard™ 96w FAST**  
 (Cat. nos. A15876, A15871)

**Run Mode: Fast**

TaqMan® Fast Advanced Master Mix (Cat. no. 4444557)		
PCR (40 cycles)		
Hold	Melt	Anneal/extend
95°C	95°C	60°C
20 sec	1 sec	20 sec

**TaqMan® hPSC Scorecard™ 384w**  
 (Cat. nos. A15870, A15872)

**Run Mode: Standard**

TaqMan® Gene Expression Master Mix (Cat. no. 4369016)			
PCR (40 cycles)			
Hold	Hold	Melt	Anneal/extend
50°C	95°C	95°C	60°C
2 min	10 min	15 sec	1 min

**WARNING!** For every chemical, read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [www.lifetechnologies.com/support](http://www.lifetechnologies.com/support).

## Documentation and Support

For additional product and technical information, such as Safety Data Sheets (SDS), Certificates of Analysis, etc., visit our website at [www.lifetechnologies.com](http://www.lifetechnologies.com). For further assistance, email our Technical Support team at [techsupport@lifetech.com](mailto:techsupport@lifetech.com).

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