



Human Stem Cell Pluripotency Detection Kit (HSC PCR)

Catalog Number: 0853, 50 reactions

Product Description

The pluripotency of human embryonic and induced pluripotent stem cells are sustained by certain essential transcription factors[1]. ScienCell has created a convenient multiplex PCR kit for the routine detection of these key pluripotency factors to ensure the quality of your human ESCs/iPSCs. Multiplex PCR allows two or more genes to be amplified in a single PCR reaction by using multiple primer pairs in a single reaction mixture, allowing for considerable savings in labor, cost and precious DNA samples. All required PCR reagents are supplied in this kit. Simply add DNA template and perform the PCR reaction. Tube 1 ready-mix reaction contains *Nanog*, *Sox2* and *Oct-4* primers that allows for the detection of pluripotency.

Kit Components

Cat. No.	# of vials	Name	Quantity	Storage
0853a	1	Tube 1: Pluripotency ready-mix	900 μ L	-20°C
0853b	1	nuclease-free H ₂ O	1mL	-20°C

Materials to be Supplied by the User

thin wall PCR tubes
DNA template
thermal cycler
agarose gel
ethidium bromide
electrophoresis system
gel imager

Quality Control

cDNAs from human pluripotent stem cells were used as template DNA. Each PCR product was sequenced to ensure specificity.

Product Use

HSC PCR kit is for research use only. It is not approved for human or animal use, or for application in *in vitro* diagnostic procedures.

Storage

Store in -20°C upon receipt. Avoid repeated freeze thaw cycles by making five aliquots at 180 μ L each.

Shipping

Dry ice.

References

[1] Lingyi Chen and George Q. Daley (2008) Molecular basis of pluripotency. *Hum. Mol. Genet.* 17 (R1): R23-R27.

Procedures

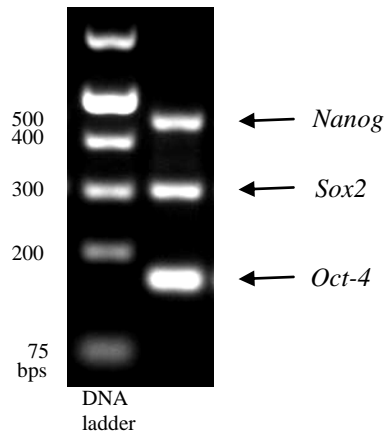
1. Mix the following components in a thin-wall PCR tube:

Component	Amount
Tube 1 ready mix	18 μ L
cDNA template	1ul (corresponding to 50-100ng total RNA)
H ₂ O	1ul
Total	20ul

2. Perform PCR using the following conditions:

Step 1: 94 °C	2min
Step 2: 94 °C	30sec
Step 3: 58 °C	30sec
Step 4: 72 °C	1min
Step 5: repeat step steps 2-4 for 29 times	
Step 6: 72 °C	10min

3. Visualize PCR products on a 1.5% agarose gel containing ethidium bromide.



Expected product sizes:

Gene	Expected Size
<i>Nanog</i>	459 bps
<i>Sox2</i>	301 bps
<i>Oct-4</i>	161 bps