Human Mesenchymal Stem Cell Adipogenesis Detection Kit
(HMSC-A PCR)
Cat. No. 8298, 50 reactions

Product Description

Human mesenchymal stem cells (MSC) are a population of multipotent cells that can be differentiated into multiple lineage-specific cells, which can form bone, fat, cartilage, muscle and tendon. Among them, adipocytes are one of the cell types that can be derived from MSCs in the process of adipogenesis. The process of fat formation plays a role in obesity, cardiovascular diseases and metabolic disorders.

ScienCell has created a convenient multiplex PCR kit for the routine detection of human mesenchymal stem cell adipogenesis. Multiplex PCR allows two or more primers to be amplified in a single PCR reaction by using multiple primer pairs in a single reaction mixture, allowing for considerable saving in labor, cost and precious DNA samples. All required PCR reagents are supplied in this kit. Simply add DNA template and perform PCR reaction. Tube 1 ready-mix reaction contains *PPARγ* and *FABP4* primers that allow for the detection of mid- and late-stage of human MSC adipogenesis, respective.

Kit Components

Cat. No.	# of vials	Name	Quantity	Storage
8298a	1	Tube 1: differentiation ready-mix	660 µL	-20°C
8298b	1	Nuclease-free H_2O	1 mL	-20°C

Materials to be Supplied by the User

DNA templates
Thin wall PCR tubes
Thermal cycler
Agarose gel
Ethidium bromide
Electrophoresis system
Gel imager

Quality Control

cDNAs from differentiated human mesenchymal stem cells during the time-course of adipogenesis were used as template DNA. Each PCR product was sequenced to ensure specificity.

Product Use

HMSC-A 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 at -20°C upon receipt. Avoid repeated freeze thaw cycles by making six aliquots at 110 µL each.

Shipping

Dry ice.

Procedures

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

Component	Amount
Tube 1 ready-mix	12 µL
cDNA template*	2 µg
Nuclease-free H_2O	up to 20 µL

*cDNA concentration should be ~2 µg/µL

2. Perform PCR using the following conditions:

   Step 1: 95°C 3 min

   Step 2: 95°C 30 sec

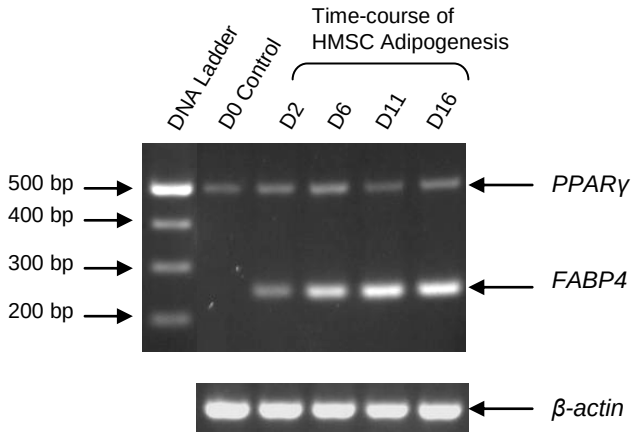
   Step 3: 58°C 30 sec

   Step 4: 72°C 1 min

   Step 5: Repeat Steps 2-4 for 24 times

   Step 6: 72°C 2 min

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



4. Expected product sizes:

Gene	Expected Size
PPARγ	505bp
FABP4	251bp