Pluripotency Check PCR Primer Set

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CATALOG NO. AMOUNT:
631966 16 x 25 rxns

Description
Validating the pluripotent status (ability to differentiate into specialized cells of all three germ layers) of your culture is a critical step in stem cell research. The Pluripotency Check PCR Primer Set consists of 16 forward and reverse primer mixes, based on nine genes expressed in pluripotent stem cells, plus two control genes.

Lot Number Specified on product label.

Storage Conditions
• –20°C

Storage Buffer
• 1X TE Buffer

Shelf Life 1 year from date of receipt under proper storage conditions.

Shipping Conditions
• Dry ice (–70°C)

Concentration 10 μM

Package Contents
• 50 μl Oct3/4 Primer Mix (Total)
• 50 μl Oct3/4 Primer Mix (Endogenous)
• 50 μl Nanog Primer Mix (Total)
• 50 μl Nanog Primer Mix (Endogenous)
• 50 μl Sox2 Primer Mix (Total)
• 50 μl Sox2 Primer Mix (Endogenous)
• 50 μl c-Myc Primer Mix (Total)
• 50 μl c-Myc Primer Mix (Endogenous)
• 50 μl Klf4 Primer Mix (Total)
• 50 μl Klf4 Primer Mix (Endogenous)
Certificate of Analysis
Pluripotency Check PCR Primer Set

- 50 μl Ecat1 Primer Mix
- 50 μl ERas Primer Mix
- 50 μl Esg1 Primer Mix
- 50 μl Rex1 Primer Mix
- 50 μl β-Actin Control Primer Mix
- 50 μl GAPDH Control Primer Mix

**Pluripotency Check PCR Primer Sequence Information**

**Oct3/4 (Total)**
Forward: 5'-CTGAGGGCCAGGCAGGACACGAG-3'
Reverse: 5'-CTGTAGGGAGGGCTTCGGGCACTT-3'
Amplicon size: 485 bp
GenBank Accession No.: NM_013633

**Klf4 (Total)**
Forward: 5'-CACCATGGACCCGGGCTGGCTGCCAGAAA-3'
Reverse:
Amplicon size: 739 bp
GenBank Accession No.: NM_010637

**Oct3/4 (Endogenous)**
Forward: 5'-CTTTCACCAGGCCTGGCTGACT-3'
Reverse: 5'-TGGCCGAGGACATGGGAGATCC-3'
Amplicon size: 224 bp
GenBank Accession No.: NM_013633

**Klf4 (Endogenous)**
Forward: 5'-AGTGTGACAGGGCCTTTTCCAGGT-3'
Reverse: 5'-AAGCTGACTTGCTGGGAACTTGACC-3'
Amplicon size: 206 bp
GenBank Accession No.: NM_010637.3

**Nanog (Total)**
Forward: 5'-AGGTGTTTGAGGGTAGCTC-3'
Reverse: 5'-CGGTTCATCATGGGCGAG-3'
Amplicon size: 364 bp
GenBank Accession No.: AB093574

**Nanog (Endogenous)**
Forward: 5'-CAGGTGTTTGAGGGTAGCTC-3'
Reverse: 5'-CGGTTCATCATGGGCGAG-3'
Amplicon size: 223 bp
GenBank Accession No.: AB093574

**Ecat1**
Forward: 5'-TGTGGGGCCCTGAAAGGCGAGCTGAGAT-3'
Reverse: 5'-ATGGGCCGCCATACGACGACGCTCAACT-3'
Amplicon size: 164 bp
GenBank Accession No.: AB211060

**Eras**
Forward: 5'-ACTGCCCCTCATCAGACTGCTACT-3'
Reverse: 5'-ACTGCCTTGTACTCGGGTAGCTG-3'
Amplicon size: 210 bp
GenBank Accession No.: NM_181548

**Sox2 (Total)**
Forward: 5'-GGTTAACCTTTCCTCCACTCAG-3'
Reverse: 5'-TCACATGTGCGACAGGGGCAG-3'
Amplicon size: 193 bp
GenBank Accession No.: NM_011443

**Esg1**
Forward: 5'-GAAAGTCTGGTTCTGGCAAGGARTG-3'
Reverse: 5'-ACTCGATACTGGGCTAGC-3'
Amplicon size: 376 bp
GenBank Accession No.: NM_025274
Certificate of Analysis  
Pluripotency Check PCR Primer Set  
Cat. No. 631966  

Sox2 (Endogenous)\(^1\)
Forward: 5’-TAGAGCTAGACTCCGGGCGATGA-3’
Reverse: 5’-TTGCCTTAAAACAAGACCACGAAA-3’
Amplicon size: 297 bp
GenBank Accession No.: NM_011443

Rex1\(^1\)
Forward: 5’-ACGAGTGCGAGTTTCTTCTTGGA-3’
Reverse: 5’-TATGACTCACTTCCAGGGGCACT-3’
Amplicon size: 287 bp
GenBank Accession No.: NM_009556

**Product User Manuals**
User manuals for Clontech products are available for download at [www.clontech.com/manuals](http://www.clontech.com/manuals).

The following user manuals apply to this product:
- Pluripotency Check PCR Primer Set Protocol-at-a-Glance (PT5086-2)

**References**

**Quality Control Data**
First-strand cDNAs were synthesized from E14TG2a mES total RNA using SMART™ MMLV Reverse Transcriptase (Cat. No. 639523) and an oligo(dT) primer. The resulting first-strand cDNA was then used with each primer pair in the Pluripotency Check PCR Primer Set according to the protocol outlined in PT5086-2.

Amplicons of the following sizes were observed:

<table>
<thead>
<tr>
<th>Gene</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct3/4 (Total)</td>
<td>~485 bp</td>
</tr>
<tr>
<td>Oct3/4 (Endogenous)</td>
<td>~224 bp</td>
</tr>
<tr>
<td>Nanog (Total)</td>
<td>~364 bp</td>
</tr>
<tr>
<td>Nanog (Endogenous)</td>
<td>~223 bp</td>
</tr>
<tr>
<td>Sox2 (Total)</td>
<td>~193 bp</td>
</tr>
<tr>
<td>Sox2 (Endogenous)</td>
<td>~297 bp</td>
</tr>
<tr>
<td>c-Myc (Total)</td>
<td>~228 bp</td>
</tr>
<tr>
<td>c-Myc (Endogenous)</td>
<td>~170 bp</td>
</tr>
<tr>
<td>Klf4 (Total)</td>
<td>~739 bp</td>
</tr>
<tr>
<td>Klf4 (Endogenous)</td>
<td>~206 bp</td>
</tr>
<tr>
<td>Ecat1</td>
<td>~164 bp</td>
</tr>
<tr>
<td>ERas</td>
<td>~210 bp</td>
</tr>
<tr>
<td>Esg1</td>
<td>~376 bp</td>
</tr>
<tr>
<td>Rex1</td>
<td>~287 bp</td>
</tr>
<tr>
<td>β-Actin</td>
<td>~603 bp</td>
</tr>
<tr>
<td>GAPDH</td>
<td>~568 bp</td>
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</tbody>
</table>

(PA023566)
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This document has been reviewed and approved by the Clontech Quality Assurance Department.