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.

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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)

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(PA023566)

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

Pluripotency Check PCR Primer Sequence Information

Oct3/4 (Total)[1]
Forward: 5'-CTGAGGGCCAGGCAGGAGCACGAG-3'
Reverse: 5'-CTGTAGGGAGGGCTTCGGGCACTT-3'
Amplicon size: 485 bp
GenBank Accession No.: NM_013633

Klf4 (Total)[1]
Forward: 5'-CACCATGGACCCGGGCGTGGCTGCCAGAAA-3'
Reverse:
Amplicon size: 739 bp
GenBank Accession No.: NM_010637

Oct3/4 (Endogenous)[1]
Forward: 5'-TCTTTCCACCAGGCCCCCGGCTC-3'
Reverse: 5'-TGCGGGCGGACATGGGGAGATCC-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)[1]
Forward: 5'-AGGGTCTGCTACTGAGATGCTCTG-3'
Reverse: 5'-CAACCACTGGTTTTTCTGCCACCG-3'
Amplicon size: 364 bp
GenBank Accession No.: AB093574

Ecat1[1]
Forward: 5'-TGTGGGGCCCTGAAAGGCGAGCTGAGAT-3'
Reverse: 5'-ATGGGCCGCCATACGACGACGCTCAACT-3'
Amplicon size: 164 bp
GenBank Accession No.: AB211060

Nanog (Endogenous)[1]
Forward: 5'-CAGGTGTTTGAGGGTAGCTC-3'
Reverse: 5'-CGGTTCATCATGGTACAGTC-3'
Amplicon size: 223 bp
GenBank Accession No.: AB093574

ERas[1]
Forward: 5'-ACTGCCCCTCATCAGACTGCTACT-3'
Reverse: 5'-CACTGCCTTGTACTCGGGTAGCTG-3'
Amplicon size: 210 bp
GenBank Accession No.: NM_181548

Sox2 (Total)[1]
Forward: 5'-GGTTACCTCTTCCTCCCACTCCAG-3'
Reverse: 5'-TCACATGTGCGACAGGGGCAG-3'
Amplicon size: 193 bp
GenBank Accession No.: NM_011443

Esg1[1]
Forward: 5'-GAAGTCTGGTTCCTTGGCAGGATG-3'
Reverse: 5'-ACTCGATACACTGGCCTAGC-3'
Amplicon size: 376 bp
GenBank Accession No.: NM_025274

Sox2 (Endogenous)[1]
Forward: 5'-TAGAGCTAGACTCCGGGCGATGA-3'
Reverse: 5'-TTGCCTTAAACAAGACCACGAAA-3'
Amplicon size: 297 bp
GenBank Accession No.: NM_011443

Rex1[1]
Forward: 5'-ACGAGTGGCAGTTTCTTCTTGGGA-3'
Reverse: 5'-TATGACTCACTTCCAGGGGGCACT-3'
Amplicon size: 287 bp
GenBank Accession No.: NM_009556

c-Myc (Total)[1]
Forward: 5'-CAGAGGAGGAACGAGCTGAAGCGC-3'
Reverse: 5'-TTATGCACCAGAGTTTCGAAGCTGTTCG-3'
Amplicon size: 228 bp
GenBank Accession No.: NM_010849

ß-Actin
Forward: 5'-CCTGAACCCTAAGGCCAACC-3'
Reverse: 5'-GCAATGCCTGGGTACATGGT-3'
Amplicon size: 603 bp
GenBank Accession No.: NM_007393.3

c-Myc (Endogenous)[1]
Forward: 5'-TGACCTAACTCGAGGAGGAGCTGGAATC-3'
Reverse: 5'-AAGTTTGAGGCAGTTAAAATTATGGCT GAAGC-3'
Amplicon size: 170 bp
GenBank Accession No.: NM_010849

GAPDH
Forward: 5'-CCGCATCTTCTTGTGCAGTG-3'
Reverse: 5'-CTGTGGTCATGAGCCCTTCC-3'
Amplicon size: 568 bp
GenBank Accession No.: NM_008084.2

Product User Manuals

User manuals for Clontech products are available for download at **www.clontech.com/manuals.**
The following user manuals apply to this product:

- Pluripotency Check PCR Primer Set Protocol-at-a-Glance (PT5086-2)

References

1. Takahashi, K., and Yamanaka, S. (2006) *Cell* **126**(4):663–676.

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:

Oct3/4 (Total)	~485 bp	Klf4 (Total)	~739 bp
Oct3/4 (Endogenous)	~224 bp	Klf4 (Endogenous)	~206 bp
Nanog (Total)	~364 bp	Ecat1	~164 bp
Nanog (Endogenous)	~223 bp	ERas	~210 bp
Sox2 (Total)	~193 bp	Esg1	~376 bp
Sox2 (Endogenous)	~297 bp	Rex1	~287 bp
c-Myc (Total)	~228 bp	ß-Actin	~603 bp
c-Myc (Endogenous)	~170 bp	GAPDH	~568 bp

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

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