Certificate of Analysis

In the interest of conserving resources, we are no longer shipping manuals with products. Please visit **www.clontech.com/manuals** to obtain an electronic version.

PRODUCT: Mouse 7-day Embryo Matchmaker™ cDNA Library

CATALOG No. 638844

LOT NUMBER: 1003027

STORAGE CONDITIONS
- Store library at –70°C.
- Avoid repeated freeze/thaw cycles.

SHELF LIFE
1 year from date of receipt under proper storage conditions

SHIPPING CONDITIONS
Dry ice (–70°C)

mRNA SOURCE
Pooled from 200 Swiss Webster/NIH embryos

NOTE: No further information on the mRNA source was made available to Clontech.

PACKAGE CONTENTS
- 2 x 1.0 ml library culture (in *E. coli* BNN132)
- *Saccharomyces cerevisiae* strain AH109
- *Saccharomyces cerevisiae* strain CG-1945
- Matchmaker™ Two-Hybrid System 3 User Manual (PT3247-1)
- Yeast Protocols Handbook (PT3024-1)
- pACT2 Vector Information Packet (PT3022-5)

* **TITER:** $\geq 10^8$ cfu (of BNN132)/ml in LB broth & 25% sterile glycerol

CLONING VECTOR: pACT2

CLONING SITE: *Xho* I/*Eco*R I

ADAPTOR SEQUENCE: 5' AATTCGCGGCCGCGTCGAC 3'
3' GCGCCGGCGCAGCTG 5'

PRIMING METHOD: *Xho* I-$(dT)_{15}$ primed

FOR RESEARCH USE ONLY

QUALITY CONTROL DATA

1. Library Information

A. Estimated % of Colonies with Inserts:	93%
B. Number of Independent Clones:	3.5×10^6
C. Average cDNA Size:	1.9 kb
D. cDNA Size Range:	0.4 – 3.8 kb

(The average cDNA size and size range were determined by examination of an autoradiogram of the cDNA prior to cloning.)

E. Amplification: This library was amplified once in BNN132.

- This pACT2 library was released from a λACT2 library.

* Please retiter the library before use. For library amplification, plate out the library to obtain isolated colonies on each plate (approximately 10^4–10^5 colonies per plate). Plating at a higher density may cause loss of library representation.

APPROVED BY: _____

(PA0X771)

Clontech

United States/Canada
800.662.2566
Asia Pacific
+1.650.919.7300
Europe
+33.(0)1.3904.6880
Japan
+81.(0)77.543.6116

Clontech Laboratories, Inc.
A Takara Bio Company
1290 Terra Bella Ave.
Mountain View, CA 94043
Technical Support (US)
E-mail: tech@clontech.com
www.clontech.com

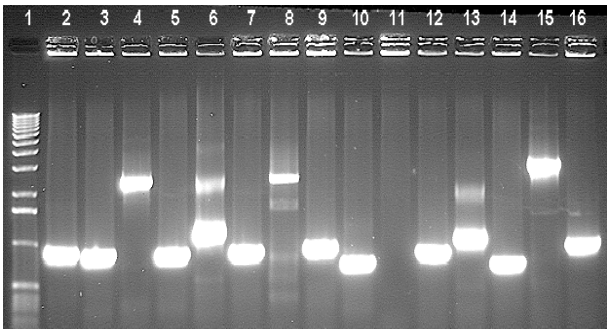
QUALITY CONTROL DATA continued

2. Insert Size Range Analysis

15 colonies were randomly picked and subjected to long-distance PCR using Clontech's Matchmaker™ AD LD-Insert Screening Amplimers (Cat. No. 630433) and Advantage® cDNA PCR Kit (Cat. No. 639101) in a Perkin-Elmer DNA Thermal Cycler.

14 of the 15 colonies contained inserts as determined by PCR.

Lane:
1. 1-kb DNA ladder
2. 1.0 kb
3. 0.9 kb
4. 2.6 kb
5. 0.9 kb
6. 1.4 kb
7. 1.0 kb
8. 2.8 kb
9. 1.0 kb
10. 0.9 kb
11. no insert
12. 1.0 kb
13. 1.3 kb
14. 0.8 kb
15. 3.6 kb
16. 1.0 kb



3. Coprecipitant Usage

This library was constructed using yeast tRNA as a coprecipitant.

☐ yes ☒ no

The library was subjected to PCR screening using yeast-specific 5S rRNA primers. No amplified product was observed.

4. Analysis of Sequence Representation

Sequence representation is evaluted by colony or plaque hybridization using a gene-specific probe. Mammalian libraries are screened with a human β-actin probe which cross-reacts with all mammalian β-actin cDNA. All human cDNA libraries must show a minimum β-actin frequency of 0.10%, and all other mammalian cDNA Libraries must show minimum β-actin frequency of 0.05%. Nonmammalian cDNA libraries are screened with a ubiquitously expressed species-specific probe.

Note: The frequency of β-actin positive clones varies among libraries made with RNA from different tissues and species. A frequency of >0.10% in a human cDNA library suggests a reasonably high probability of finding a rare transcript [Hagen, F. S., et al. (1988) BioTechniques **6**:340–345.] For nonhuman mammalian cDNA libraries, a frequency of 0.05% suggests a reasonably high probability of finding a rare message in those libraries (Clontech observation, unpublished).

The percentage of colonies or plaques to which β-actin hybridized: 0.13%

Note: The β-actin probe may hybridize to other forms of actin.

QUALITY CONTROL DATA continued

5. PCR Screening for Specific Sequences

1 µl of the library lysate was screened by PCR using PCR primers for one or more of the following gene transcripts: β-actin, G3PDH, or transferrin receptor. β-actin and G3PDH represent high-abundance gene transcripts whereas transferrin receptor represents a low-abundance gene transcript. Furthermore, the β-actin primers are designed to amplify a 1.1-kb fragment near the 5' end and thus provide a stringent test for detecting the presence of full-length transcripts. (Note: Species-specific primer sets are used for human, mouse, and rat cDNA libraries; human primer sets are used for other mammalian cDNA libraries.)

The presence of the following 2 sequences were determined using PCR.

β-actin

G3PDH

Notice to Purchaser

Clontech products are to be used for research purposes only. They may not be used for any other purpose, including, but not limited to, use in drugs, *in vitro* diagnostic purposes, therapeutics, or in humans. Clontech products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without written approval of Clontech Laboratories, Inc.

No license is conveyed with the purchase of this product under U.S. Patents Nos. 5,804,375, 5,994,056 and 6,171,785, and corresponding patent claims outside the U.S., relating to the 5′ nuclease and dsDNA-binding dye processes. Further information on purchasing licenses may be obtained by contacting the Director of Licensing, Applied Biosystems, 850 Lincoln Centre Drive, Foster City, California 94404, USA.

Clontech, Clontech Logo and all other trademarks are property of Clontech Laboratories, Inc., unless noted otherwise. Clontech is a Takara Bio Company. ©2006 Clontech Laboratories, Inc.