

In the interest of conserving resources, we are no longer shipping manuals with products. Please visit [www.clontech.com/manuals](http://www.clontech.com/manuals) to obtain an electronic version.

## PRODUCT: Mate & Plate™ Library - Universal Human (Normalized)

**CATALOG No.** 630480

**LOT NUMBER:** 1103585A

### STORAGE CONDITIONS

Store all components at  $-70^{\circ}\text{C}$ .

Do not refreeze.

### SHELF LIFE

1 year from date of receipt under proper storage conditions.

### SHIPPING CONDITIONS

Dry ice ( $-70^{\circ}\text{C}$ ).

### mRNA SOURCE

Mixture of poly A+ RNAs from a collection of adult human tissues chosen to represent a broad range of expressed genes. Both male and female donors are represented. Modeled after the Clontech Human Universal Reference Total RNA (Cat. No. 636538).

**CLONING VECTOR:** pGADT7-RecAB

**CLONING SITE:** Sfi I A/Sfi I B

**PRIMING METHOD:** Sfi I (dT)<sub>30</sub> primed

**YEAST GENOTYPE (Y187):** *MAT $\alpha$* , *ura3-52*, *his3-200*, *ade2-101*, *trp1-901*, *leu2-3, 112*, *gal4 $\Delta$* , *gal80 $\Delta$* , *met-*, *URA3 :: GAL1<sub>UAS</sub>-GAL1<sub>TATA</sub>-LacZ*, *MEL1*

### DESCRIPTION

This yeast two-hybrid library was constructed from human cDNA that had been previously normalized to preferentially remove abundant cDNAs derived from high-copy-number mRNAs. The normalization process incorporates a Duplex-Specific Nuclease (DSN) treatment and SMART technology, and increases the representation of low-copy-number transcripts in the library. This reduces the number of clones that must be screened to identify positive interactions, and facilitates the identification and characterization of novel protein-protein interactions.

A universal human cDNA library transformed into yeast strain Y187. The library can be readily mated to a *MAT $\alpha$*  GAL4 reporter strain, such as AH109 or Y2HGold (1).

### PACKAGE CONTENTS

- 5 x 1.0 ml Mate & Plate Library - Universal Human (Normalized)
- 1 x 1.0 ml Mate & Plate Library - Control (pGADT7-T in Y187)

### OTHER

- Matchmaker™ Gold Yeast Two-Hybrid User Manual (PT4084-1)
- pGADT7-RecAB Vector Information (PT3718-5)

## FOR RESEARCH USE ONLY

### QUALITY CONTROL DATA

#### 1. Quality Control Data

A. Titer (yeast colonies):	$\geq 5 \times 10^7$ cfu/ml
B. Number of independent clones:	$7.5 \times 10^6$
C. Average cDNA size:	1.48 kb
D. cDNA size range:	0.7 – 2.8 kb

(The cDNA was size-selected by excision from an agarose gel prior to cloning)

Continued on back of page.



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](mailto:tech@clontech.com)  
[www.clontech.com](http://www.clontech.com)

(PA943192)

**QUALITY CONTROL DATA** continued**2. Quality Control Data for the Pretransformed Library in Yeast**

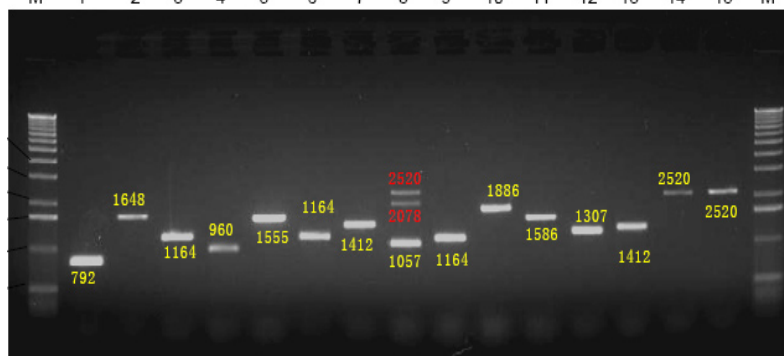
## Library Insert Size Screening

15 yeast colonies were randomly picked and screened by PCR using the Matchmaker AD LD-Insert Screening Amplimer Set (Cat. No. 630433)

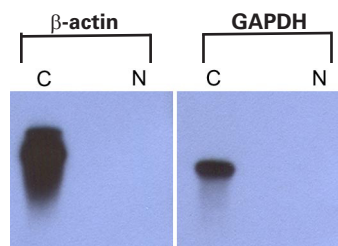
15 of 15 colonies contained inserts as determined by PCR.

Lane M. 1 kb DNA ladder

1. 0.79 kb
2. 1.65 kb
3. 1.16 kb
4. 0.96 kb
5. 1.56 kb
6. 1.16 kb
7. 1.41 kb
8. 2.52, 2.08, 1.06 kb
9. 1.16 kb
10. 1.89 kb
11. 1.59 kb
12. 1.31 kb
13. 1.41 kb
14. 2.52 kb
15. 2.52 kb

**3. cDNA Normalization**

cDNA generated using SMART™ technology was normalized using Duplex-Specific Nuclease (DSN) normalization (2, 3). Prior to cloning, the efficiency of normalization was assessed by virtual Northern blot analysis (4) comparing the abundance of GAPDH and  $\beta$ -actin in normalized and non-normalized human cDNA.



**Figure 1. DSN-Normalization reduces the amount of highly abundant transcripts.** Normalized (Lanes N) and non-normalized (Lanes C) Human Universal cDNA samples (PCR products) were electrophoresed on a 1.5% agarose gel and transferred to Hybond-N membrane. PCR-amplified probes of GAPDH and  $\beta$ -actin were labeled with  $^{32}$ P-dATP and hybridized to the membrane. GenBank Accession numbers: GAPDH, NM\_002046 and  $\beta$ -actin, NM\_001101.

**REFERENCES**

1. Pretransformed Mate & Plate™ Libraries (January 2008) *Clontechniques* **XXIV**(1):26–27.
2. Zhulidov, P.A., et al. (2004) *Nucleic Acids Res.* **32**:e37.
3. Shagin, D.A., et al. (2002) *Genom Res.* **12**:1942–1953.
4. Franz, O., et al. (1999) *Nucleic Acids Res.* **27**:e3.

## Mate & Plate™ Library - Universal Human (Normalized)

### CATALOG NO.

630480

### NOTICE TO PURCHASER:

Our 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. Our 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 prior written approval of Clontech Laboratories, Inc.

Your use of this product is also subject to compliance with the licensing requirements listed below and described on the product's web page at <http://www.clontech.com>. It is your responsibility to review, understand and adhere to any restrictions imposed by these statements.

### TRADEMARKS:

Clontech, the Clontech logo, Matchmaker, SMART, and Mate & Plate are trademarks of Clontech Laboratories, Inc.

All other marks are the property of their respective owners. Certain trademarks may not be registered in all jurisdictions. Clontech is a Takara Bio Company. ©2015 Clontech Laboratories, Inc. This document has been reviewed and approved by the Clontech Quality Assurance Department.

---

#### Clontech Laboratories, Inc.

A Takara Bio Company

1290 Terra Bella Avenue, Mountain View, CA 94043, USA

U.S. Technical Support: [tech@clontech.com](mailto:tech@clontech.com)

11/20/2015

#### United States/Canada

800.662.2566

#### Asia Pacific

+1.650.919.7300

#### Europe

+33.(0)1.3904.6880

#### Japan

+81.(0)77.543.6116