

GeneChip™ Hybridization Control Kit

Catalog Numbers 900454 and 900457

Pub. No. 701589 Rev. 3

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Introduction

Applied Biosystems™ GeneChip™ eukaryotic expression arrays contain probe sets for non-eukaryotic transcripts, which serve as controls for hybridization, washing, and staining procedures. These transcripts are labeled separately, then added to the biotinylated target cRNA before hybridization. They include *bioB*, *bioC*, and *bioD* (from the biotin synthesis pathway of *E. coli*), and *cre* (from the recombinase gene of bacteriophage P1). A synthetic biotinylated control oligo (Oligo B2) is also added to the hybridization solution to provide alignment signals for image analysis. This kit provides these controls as concentrated stocks ready to add to the hybridization mix.

Please refer to thermofisher.com for a list of supporting manuals for procedures regarding target preparation, target hybridization, washing, staining, scanning, and data analysis instructions.

Kit components

GeneChip™ Hybridization Control Kit

Cat. No.	Component	Size
900454	20X Hybridization Controls, 450 µL x 1 vial 3 nM Control Oligo B2, 1 vial	30 rxns
900457	20X Hybridization Controls, 1125 µL x 2 vials 3 nM Control Oligo B2, 1 vial	150 rxns

IMPORTANT! Reagents must be aliquoted in convenient volume and stored at -20°C. Performance can be compromised after three freeze-thaw cycles.

20X Hybridization Controls

Contains a mixture of four biotin-labeled, anti-sense, fragmented control cRNAs (*bioB*, *bioC*, *bioD*, and *cre*). The four cRNAs are prepared in staggered concentrations, with *bioB* being the lowest and *cre* the highest. The concentrations are summarized in the following table:

	<i>bioB</i>	<i>bioC</i>	<i>bioD</i>	<i>cre</i>
20X stock	30 pM	100 pM	500 pM	2000 pM
1X final	1.5 pM	5 pM	25 pM	100 pM

Control Oligo B2

The concentration of the biotin-labeled Control Oligo B2 is 3 nM (60X final concentration). The final (1X) concentration of the Control Oligo B2 is 50 pM.

Procedure

1. Remove one vial each 20X Hybridization Controls and Oligo B2 from freezer.
2. Ensure the two vials are thawed before proceeding. It is important that frozen stocks of 20X Hybridization Controls is heated to 65°C for 5 minutes to completely resuspend the cRNA before adding to the hybridization cocktail.
3. Lightly vortex the vials to ensure complete mixing and then briefly centrifuge down the samples in a microcentrifuge.
4. Aliquot the reagents in small volumes if needed to avoid more than three freeze-thaw cycles.
5. Using the following table, add the appropriate volume of the 20X Hybridization Controls and Oligo B2 to your sample.

Array format	Hybridization Mix Volume (µL)	20X Hybridization Controls (µL)	3 nM Oligo B2 (µL)
169/400	100	5	1.7
100	200	10	3.3
49/64	300	15	5.0

Ordering information

Cat. No.	Product name	Description
900454	GeneChip™ Hybridization Control Kit	30 reactions
900457	GeneChip™ Hybridization Control Kit	150 reactions
Supporting products		
900433	GeneChip™ Eukaryotic Poly-A RNA Control Kit	~100 reactions

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at www.thermofisher.com/us/en/home/global/terms-and-conditions.html. If you have any questions, please contact Life Technologies at www.thermofisher.com/support.

Storage

The GeneChip™ Hybridization Control Kit must be stored at -20°C in a nonfrost-free freezer.



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The information in this guide is subject to change without notice.

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Revision history: Pub. No. 701589

Revision	Date	Description
3	02 August 2017	Updated document to current template.
2	31 May 2012	Baseline for revision history.

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