



CSA 猿猴测试板 A  
**CSA: Simian Panel A**  
 (产品号 Product Number 12-1212)  
 用户使用说明 User Protocol

文本号  
**Literature Number**  
**L756 12Sep17**

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## 1.0 简介 Introduction

### 1.1 CSA 猿猴测试板概述 CSA: Simian Panel A Overview

非人灵长类动物（NHP）群落的健康与否直接关系到实验结果的准确性。本公司群落检测测试系列产品中（CSA, Colony Surveillance Assay™）：猿猴测试板 A 可以保证高灵敏，稳定□检测群落健康。相较于酶标法（ELISA）或其他珠粒法，本产品简单易用且配合相应的小型分析仪器可进行多样品多种疾病的多重检测，大大降低了实验成本。通过使用本产品可以检测出是否该群落曾经感染过所测病原体，从而保证群落及饲养员的健康以及实验结果的准确性。

The health and well-being of your non-human primate (NHP) colonies are critical to the success of your research. The Colony Surveillance Assay™: Simian Panel A assay can provide a sensitive, robust and user-friendly alternative to ELISA or bead-based methods by combining multiplex detection technologies with compact and cost-effective analysis tools for colony health screening. This approach provides an indication of previous exposure to pathogenic agents present in NHP colonies, both to identify potential infectious threats to the colony and their human caretakers and to ensure your research remains uncompromised.

CSA 猿猴测试板 A 的主要用途是持续监测群落没有感染特定的病原体。特别是通过多重检测免疫球蛋白 G（IgG）本产品可以记录整个群落的健康状况。本产品主要用于样本检测，并非定性的诊断方法。检测阈值的设定已通过稳定性验证优化并以此用作测试的初始值。常规使用本产品检测您所拥有的群落可以保证其健康并减少需全面且昂贵的定性检测的样本数量。

The CSA: Simian Panel A is intended to be used as a tool for the continual monitoring of your specific pathogen-free (SPF) colony. This method measures specific serum IgG in a multiplex format, providing you with data for tracking your colony's health. The use of CSA: Simian Panel A kit is intended for use as a profiling assay and not a definitive diagnostic assay. Cut-off values have been determined through robust validation methods to provide universal optimal sensitivity, and are to be used as suggested starting points for your analysis. Routine surveillance of your colony with the CSA: Simian Panel A assay will give you confidence in your colony health, and reduce the number of samples needing to be tested by more expensive and time-consuming methods.

**注意：** 本公司高度推荐客户用其他方法（例如 IFA 或 PCR）来签证所得结果以确定群落阳性结果的真实性。

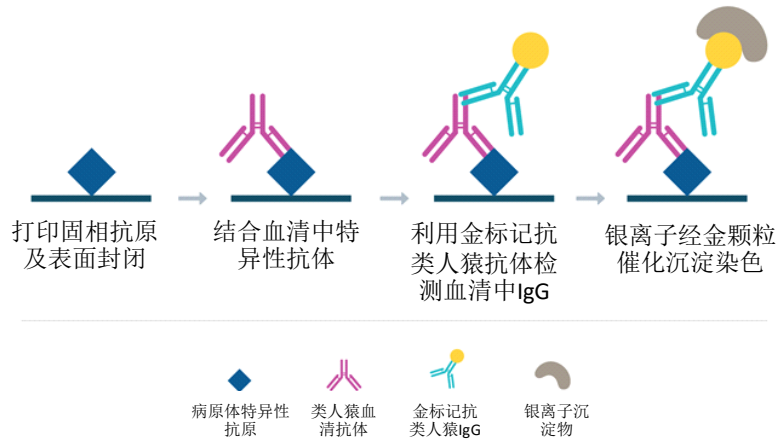
**NOTE:** Intuitive Biosciences highly recommends using secondary methods (such as IFA or PCR) to validate your results, resolve equivocal results, and confirm positive results in your SPF colony.

CSA 猿猴测试板 A 试剂盒包含了测试九十二个样本所需的试剂以及用作对照的血清样本。CSA 猿猴测试板 A 试剂盒所需实验仪器同简单的酶标法（ELISA）所需实验仪器类似。SilverQuant® 银离子显色试剂用于所有 CSA 猿猴测试的显色。配合 AthenaQuant® 扫描成像分析仪及其软件，用户可以方便快捷的进行样本检测并得到测试结果与结果分析。

The CSA: Simian Panel A kit consists of reagents sufficient to process up to ninety-two samples, and the included control sera. The CSA: Simian Panel A kit uses the same basic laboratory instruments as an ELISA. The SilverQuant® chromogenic reagents are used for signal generation on the CSA: Simian array products. Assay results are measured using the AthenaQuant® System, where data is easily generated using a scanner and quickly analyzed using the included AthenaQuant software.

图一 CSA 猿猴测试板 A 原理图 Figure 1. CSA: Simian Panel A Schematic

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## 1.2 SilverQuant 测试板表面化学特性 SilverQuant Surface Chemistry

CSA 猿猴测试板 A 上的试剂阵列是印在本公司专利生产的蛋白质微阵列测试板上。此测试板专门用于基于蛋白质微阵列的高灵敏度多重免疫测试

The CSA: Simian Panel A arrays are printed on Intuitive Biosciences' proprietary protein microarray slides and are specifically designed for multiplex immunoassays and deliver high signal-to-noise with high sensitivity for protein microarray applications.

## 2.0 试剂盒所含物品 Kit Contents

物品名 Component	描述 Description	数量 Quantity	产品标号 Prod. No.
CSA 猿猴测试板 A 孔板 CSA: Simian Panel A Plate	每个孔板包含有 96 个子阵列，每个子阵列包含了一种不同的类人猿致病原 Plate containing 96 subarrays consisting of antigens representing unique simian pathogens	1 片 1 plate	12-1210
5 倍浓度测试板清洗缓冲液 5X Slide Wash Buffer	用于清洗未结合的蛋白质 Buffer used to remove unbound protein	100 mL	2-1039
CSA 缓冲液 CSA Buffer	用于稀释样本及金标记检测试剂 Buffer used to dilute samples and Gold Detection Reagent	100 mL	7-1037
阳性对照 Positive Control	阳性对照样品 Positive control sample	15 µL	12-1049
阴性对照 Negative Control	阴性对照样品 Negative control sample	15 µL	12-1009
SilverQuant 金标记抗类人猿 IgG SilverQuant Anti-simian IgG Gold Conjugate	金标记检测试剂 Gold Detection Reagent	100 µL	10-2139
SilverQuant 试剂 A SilverQuant Reagent A	显像放大剂 A Development Reagent A	10 mL	10-2132
SilverQuant 试剂 B SilverQuant Reagent B	显像放大剂 B Development Reagent B	10 mL	10-2112

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Plate™孔板密封膜 Plate™ Well Seals	等待过程中密封孔板 Used to seal wells during sample incubation	1 each	4-1009
96 孔深孔稀释孔板 96 Deep Well Dilution Plate	血清稀释 Used for serum dilutions	1 each	12-1025
CSA 猿猴测试板 A 用户手册 CSA: Simian Panel A Plate User Protocol			L756

### 3.0 所需材料 Required Materials

物品名 Component	描述 Description
小型离心仪 Bench-top microcentrifuge	可容纳 1.5mL 离心管 Capacity to hold 1.5 mL microcentrifuge tubes
涡旋混匀仪 Vortex Mixer	多种 Various
1.5mL 离心管 1.5 mL Microcentrifuge tubes	多种 Various
15mL 离心管 15 mL conical tubes	多种 Various
50mL 离心管 50 mL conical tubes	多种 Various
去离子或超纯水 Deionized or Ultrapure Water	保证水的纯度 Clean water
微阵列扫描仪 Microarray Scanner	AQ 1000
微阵列图像处理软件 Microarray Image Analysis Software	AthenaQuant 软件 (已包含 AQ 1000) AthenaQuant software (included with Product AQ 1000)
CSA 猿猴测试板 A 数据分析模板 CSA: Simian Panel A data analysis template	自带 AthenaQuant 软件 Included with AthenaQuant software
微量移液器 Micropipettes	种类包括单个, 可重复和 8 管道; 多种不同容量 (至少需要 25 uL, 200 uL, 和 250 uL) Single, Repeat, and 8-channel; various capacities

### 4.0 Storage 保存

CSA 猿猴测试板 A (产品号 12-1212) 试剂盒在使用前需要保存在 2-8 °C 的环境下。

The CSA: Simian Panel A (Prod. No. 12-1212) kit should be stored at 2-8°C until used.

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## 5.0 安全使用须知 Safety and Handling

请参照处理动物体液的通用安全注意事项。对其他试剂也应遵循处理实验室材料的正常预防措施。根据条例 29CFR1910.1200, 实验所用试剂或物品不被视为生物危险品。但是该产品所含试剂或物品的化学, 物理和毒理特性尚未彻底确定。我们建议在使用任何材料时使用手套, 实验室外套和眼睛防护装置。

Use Universal Safety Precautions when handling animal body fluids. For all other materials, normal precautions exercised in handling laboratory materials should be followed. The material is not considered hazardous according to 29CFR1910.1200. The chemical, physical, and toxicological properties of this product may not, as yet, have been thoroughly investigated. We recommend the use of gloves, lab coats, and eye protection when working with any material.

## 6.0 步骤概述 Protocol Overview

CSA 猿猴测试板 A 试剂盒包含有足够剂量的试剂以定性分析多达 92 种血清样品。然而试剂盒所含试剂仅够一次实验。特别是 SilverQuant 试剂 B 对空气敏感, 一旦打开必须当天使用。SilverQuant 试剂 A 和 B 都对光照敏感, 应避免过多的光照。

The CSA: Simian Panel A kit contains sufficient reagents for qualitative analysis of up to 92 serum samples. However, only a single assay may be performed with the reagents included in the kit. Reagent B is air sensitive and once opened, it must be used within a day. Both Reagent A and Reagent B are light sensitive and should not be exposed to direct or excess light.

如果需要, 可以仅使用部分 96 孔板, 但必须使用**新鲜**的 SilverQuant 试剂 A 和 SilverQuant 试剂 B。请参照产品号可以另行购买额外的 SilverQuant 试剂。

If desired partial plates can be run, but **fresh** Reagent A and Reagent B must be used. Additional reagents for regular use of partial plates are available with Product No.

CSA 猿猴测试板 A 需小心使用, 特别是避免碰触孔板底部并且在使用过程中保持湿润。血清样本的合理储存和使用对获得好的数据至关重要。尽量避免反复解冻, 应等分并冷冻血清样品在 -80° C 以进行长期储存。已使用且显影的 CSA 猿猴测试板可在常温下长时间按储存。

CSA: Simian Panel A plates should be handled with care (never touch the bottom of the well) and not allowed to dry once they have been wetted. Proper storage and handling of serum samples is critical for obtaining optimal data. Avoid repeated freeze-thaw cycles and aliquot and freeze samples at -80°C for long-term storage. Developed CSA array plates are stable and can be stored indefinitely at Room temperature.

## 7.0 具体流程 Procedure

### 7.1 缓冲液和试剂准备

#### Preparation of Buffers and Reagents

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**注意：**使用前应保证试剂盒中所有试剂重新恢复到室温（18-30°C）。

**NOTE:** Equilibrate entire kit to room temperature (18-30°C) prior to use for peak assay performance.

7.1.1 使用 500 mL 以上的容器并在其中加入 400 mL 纯水。然后加入 100 mL 5 倍浓度测试板清洗缓冲液（产品号 2-1039）。充分混合均匀后在室温下保存，最久可保存一个月。

In a container capable of holding at least 500 mL, add 400 mL of ultrapure water. Add 100 mL of the 5X Slide Wash Buffer (Product No. 2-1039). Mix thoroughly. Store at room temperature for up to 1 month.

## 7.2 稀释血清及添加至测试板中 Serum Dilution and Addition to the Array

**注意：**如果仅使用了测试板的一部分，需用 Plate™孔板密封膜（产品号 4-1009）盖住未使用的部分以防液体进入。

**NOTE:** If using partial plate, cover the unused wells with plate seal (Prod. No. 4-1009) to make sure the wells will not be wetted at any time and can be used in the future.

**注意：**在步骤 7.2.3 之后到扫描测试板之前，保证测试板表面湿润，没有彻底挥发干燥。

**NOTE:** After step 7.2.3, do not allow the surface of the array to dry completely at any time before you are ready to scan the plate.

7.2.1 用下表记录下每个样本在孔板中的位置  
 Note the location of each sample to be loaded in the plate map below.

	1	2	3	4	5	6	7	8	9	10	11	12
A	阳性参照 Positive Control											
B	阴性参照 Negative Control											
C												
D												
E												
F												
G	阴性参照 Negative Control											
H	阳性参照 Positive Control											

7.2.2 确保所有样本都已完全解冻并用混匀仪稍微混匀。5000 转速每分钟下离心样本至少 10 秒钟以确保所有液体在离心管底部。

Ensure that each sample is completely thawed, and vortex briefly. Spin each sample at 5,000 rpm for at least 10 seconds to collect the material in the bottom of the tube.

7.2.3 使用多管道移液器给测试板（产品号 12-1210）的每个孔洞中加入 200uL CSA 缓冲液（产品号 7-1037）。轻微击叩测试板边缘以保证孔洞完全浸润。

Add 200  $\mu$ L of CSA Buffer (Product No. 7-1037) to each well of the Plate (Product No. 12-1210) using a multi-channel pipettor. Tap the side of the Plate unit two times to ensure that the buffer covers each well completely.

7.2.4 翻转测试板并击敲背面三次以倒掉其中的 CSA 缓冲液。同时用无屑纸巾擦干测试板上表面孔洞间的多余液体。

Immediately remove the CSA Buffer from the wells by inverting over a sink or liquid disposal container three times. Remove excess solution from the top of the Plate by blotting dry with a lint-free wipe.



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7.2.5 马上使用多管道移液器给测试板每个孔洞加入 75uL 刚准备的 CSA 缓冲液，击叩孔板侧边并放置一边备用。

Using a multi-channel pipettor, immediately add 75  $\mu$ L of fresh CSA Buffer to each well, tap side of the Plate and set aside.

7.2.6 在 96 孔深孔板（产品号 10-1025）中除了 A1 及 H1 或阳性参照的每个孔中加入 500 uL CSA 缓冲液。

To the 96 Well Dilution Plate (Product No. 12-1025), pipette 500  $\mu$ L of CSA Buffer into the to all wells.

7.2.7 添加 5 uL 阳性对照血清（12-1049）到 96 孔深孔板的 A1（或阳性参照）孔中。用移液器反复吸放三次混匀。

Add 5  $\mu$ L of Positive Control serum (12-1049) to wells A1 (or the Positive Control wells) of the 96-well dilution plate. Mix by pipetting up and down 3 times.

7.2.8 添加 5 uL 阴性对照（12-1009）到 96 孔深孔板的 B1（或阴性参照）孔中。用移液器反复吸放三次混匀。

Add 5  $\mu$ L Negative Control (12-1009) to wells B1 (or the Negative Control wells) of the 96-well dilution. Mix by pipetting up and down 3 times.

7.2.9 参照图表依次添加 5 uL 样本血清到 96 孔深孔板的其他孔中。用移液器反复吸放三次混匀。

Add 5  $\mu$ L of each serum sample to be tested to remaining wells of the 96-well dilution plate as indicated in the table above. Mix by pipetting up and down 3 times.

**注意：**如果血清样本已稀释，请调整稀释用孔板每个孔的浓度至 1 比 100 的最终比例。

**NOTE:** If your serum sample has been diluted, please adjust the dilution accordingly for a 1:100 dilution into the well dilution plate.

7.2.10 设置多管道移液器吸取 25 uL。然后在 96 孔深孔板的每一列用移液器反复吸放五次后再吸取 25 uL。

Set multichannel pipette to 25  $\mu$ L. For each column in the dilution plate, mix each sample by pipetting up and down 5 times prior to drawing up 25  $\mu$ L.

7.2.11 移取 25uL 已稀释的样本在 CSA 猿猴测试板 A（产品号 12-1210）的每个孔中。注意不要接触孔的底部（仅接触孔的角落或边缘）。

Dispense 25  $\mu$ L of diluted sample into each well of the CSA: Simian Panel A Plate (Prod. No. 12-1210), taking care not to touch the bottom of the well (pipette into a corner or side of the well).

7.2.12 使用孔板密封膜（产品号：4-1009）密封每个孔洞以避免挥发。击叩孔板侧边后在室温下放  $\square$  1 个小时。

Cover the wells with the provided plate seal (Prod. No. 4-1009) to prevent evaporation, tap side of the plate and incubate at room temperature for **1 hour**.



7.2.13 丢弃 96 孔深孔板于处理生物有害废弃物的垃圾桶中。

Discard sample dilution plate into appropriate biohazard waster container.

### 7.3 第一次冲洗及添加金标记试剂

#### Wash 1 and Add Gold Conjugate Reagent

7.3.1 使用小型离心机简短离心 SilverQuant 金标记抗猿猴 IgG (产品号 10-2139) 以确保所有试剂在离心管底部。并用混匀仪稍微混匀。

Briefly spin the SilverQuant Anti-Simian IgG Gold Conjugate (Product No. 10-2139) using a bench top microcentrifuge to collect all the material into the bottom of the tube and gently vortex to mix.

7.3.2 添加 55uL SilverQuant 金标记抗猿猴 IgG 至 11mL CSA 缓冲液中。轻轻混匀。

Prepare the Gold Conjugate Reagent by adding 55  $\mu$ L of SilverQuant Anti-Simian IgG Gold Conjugate to 11 mL of CSA Buffer. Mix gently and thoroughly.

- 注意：如果不是使用全部的孔板需调整稀释度。最终金标记抗猿猴 IgG 的稀释度是 1 比 200。

NOTE: If using less than a full plate, adjust dilution volume accordingly. Final dilution of Anti-Simian IgG Gold is 1:200.

7.3.3 在 CSA 猿猴测试板 A 上覆盖吸水纸巾，并在摁住纸巾后翻转以移去血清样本。击叩背面三次。丢弃吸水纸巾至处理生物有害废弃物的垃圾桶中。

Remove the serum solutions from wells by covering the CSA: Simian Panel A Plate with a paper towel or other absorbent paper, invert, and, while holding the paper towel, tap down three times. Dispose of the adsorbent paper into a biohazardous waste container.

7.3.4 使用多管道移液器加入 200 uL 1 倍稀释的清洗缓冲液(SWB)到每个孔中。击叩孔板侧边后翻转孔板移去清洗缓冲液至处理生物有害废弃物的垃圾桶中。

Add 200  $\mu$ L of 1X Slide Wash Buffer (SWB) to each well using a repeat or multi-channel pipettor and tap side of the plate. Remove SWB by inverting plate over a liquid biohazard waste container..

7.3.5 重复 7.3.4 清洗孔板 5 次，每次重新加入 200 uL 1 倍稀释的清洗缓冲液。

Repeat step 7.3.4 four more times, adding 200  $\mu$ L of 1X Slide Wash Buffer for a total of 5 washes in the Plate.

7.3.6 倒出最后一次的清洗缓冲液后马上加入 100 uL 金标记试剂（步骤 7.3.2 中准备的）。击叩孔板的侧边以保证孔底充分浸润。

Remove the final wash and immediately add 100  $\mu$ L Gold Conjugate Reagent (prepared in Step 7.3.2). Tap side of the plate to ensure bottom of the wells are completely covered.

7.3.7 室温下放□ 1 个小时。

Incubate for **1 hour** at room temperature.

## 7.4 第二次冲洗及显影

### Wash 2 and Development

7.4.1 翻转 CSA 猿猴测试板 A 以倒出所有的金标记试剂。用力晃动测试板以保证倒出所有的试剂。

Remove the Gold Conjugate Reagent from the CSA: Simian Panel A Plate inverting over a waste container. Shake plate firmly to remove liquid from bottom of wells.

7.4.2 使用多管道或可重复移液器添加 200 uL 1 倍稀释的清洗缓冲液至每个孔中。击叩孔板侧边。翻转孔板移去清洗缓冲液至废液容器中。

Add 200  $\mu$ L of 1X Slide Wash Buffer to each well using a repeat or multi-channel pipettor. Tap side of plate. . Remove Slide Wash Buffer by inverting plate over liquid waste.

7.4.3 重复步骤 7.4.2 四次以保证最终清洗五次。清洗后保证孔洞中重新□ 满清洗缓冲液以备步骤 7.4.7

Repeat **Step 7.4.2** four times, for a total of five washes. After final wash keep Slide Wash Buffer into wells until ready to perform **step 7.4.7**.

**注意:** SilverQuant 试剂 A (产品号 10-2132) 和 SilverQuant 试剂 B (产品号 10-2112) 光敏感。确保下列步骤在没有直接光照的环境下。

因为显影过程和时间紧密相关, 所□ **必须**保证迅速混合试剂 A 及 B 并快速添加至 CSA 猿猴测试板 A 的每个孔中。多管道或可重复移液器可以确保快速添加混合试剂 A 及 B 至 CSA 猿猴测试板 A。

请确保阅读并理解**步骤 7.4.4 至 7.5.1**。并在之前准备好所有需要的仪器及试剂。

**NOTE:** SilverQuant Reagent A (Product No. 10-2132) and SilverQuant Reagent B (Product No. 10-2112) are sensitive to light. Be sure to perform the following steps out of direct sunlight.

It **CRITICAL** to add the reagent mix quickly to the CSA: Simian Panel A Plate because the reaction is time dependent. Once Reagent A and B have been mixed together and added to the reagent trough, quick add to plate using a multi-channel pipettor or repeat pipettor.

Be sure to read and understand **Steps 7.4.4 -7.5.1** and have all the needed equipment prepared and ready.

7.4.4 设置一个三分的闹钟。

Set a timer to 3 minutes.

7.4.5 替换多管道移液器的吸量管并设着移液量至 100 uL。准备一个新的可盛放 20 mL 试剂槽。

Add pipet tips to a multichannel and prepare it to dispense 100  $\mu$ L. Obtain a fresh reagent trough capable of holding 20 mL of liquid.

- 7.4.6 准备显影液：将 SilverQuant 试剂 A（产品号 10-2132）直接倒入 SilverQuant 试剂 B（产品号 10-2112）的瓶中。盖上盖后用力摇晃~3 秒钟后将混合液倒入试剂槽。

Prepare the SilverQuant Development Reagent by directly pouring SilverQuant Reagent A (Product No. 10-2132) into SilverQuant Reagent B bottle (Product No. 10-2112). Cap the bottle and shake vigorously for ~3 seconds and pour into reagent trough.

- 7.4.7 快速翻转孔板移去清洗缓冲液至废液容器中并使用纸巾擦干。使用多管道移液器立即加  $\square$  100  $\mu$ L SilverQuant 显影液到 CSA 猿猴测试板 A 中。击叩孔板的侧边两次以保证孔底充分浸润。

Quickly remove Slide Wash Buffer from the wells by inverting Plate over liquid waste. Dry plate with lint free wipe. Immediately add 100  $\mu$ L of the SilverQuant Development Reagent to each well of the CSA: Simian Panel A Plate using the multichannel pipette. Tap the side of the plate twice to ensure that the Development Reagent covers the entire bottom of the plate.

- 7.4.8 立即启动已设置的闹钟并放  $\square$  3 分钟整。在放  $\square$  的过程中将 CSA 猿猴测试板 A 放置于遮光盖（或一个盒盖）下以避免其受到光线影响。

Immediately start the timer and incubate for exactly 3 minutes. Place a cover (i.e. the lid of a box) over the CSA: Simian Panel A Plate to protect it from light.

- 7.4.9 准备一个刚  $\square$  满高纯水的实验用喷壶在废水池旁。

Obtain a squirt bottle filled with fresh ultra-pure water and place next to liquid waste container.

## 7.5 最终冲洗

### Final Rinse

- 7.5.1 放  $\square$  时间到了之后马上翻转 CSA 猿猴测试板 A，倒掉显影液到专门的废水槽中。立刻用  $\square$  有高纯水的喷枪瓶清洗每个孔洞。翻转孔板移去废液至废液容器中。

When the incubation time expires, invert the CSA: Simian Panel A Plate to remove the Development Reagent from the Plate into a proper chemical waste container and immediately fill the wells with ultrapure water using the squirt bottle. Remove water by inverting plate over sink or liquid waste..

- 7.5.2 用高纯水反复冲洗测试板两次以保证没有显影液残留。

Repeat the water flush twice to ensure all the Development Reagent is rinsed out.

- 7.5.3 使用板式离心机干燥 CSA 猿猴测试板 A（翻转测试板并在下面垫上纸巾然后小心离心）或风干。

Dry the CSA: Simian Panel A Plate by either using a plate centrifuge (inverting ProPlate over paper towel and gently spin down the plate) or air dry.

	<p style="text-align: center;"><b>CSA 猿猴测试板 A</b>  <b>CSA: Simian Panel A</b>  <small>(产品号 Product Number 12-1212)</small>  <b>用户使用说明 User Protocol</b></p>	<p style="text-align: center;"><b>文本号</b>  <b>Literature Number</b>    <b>L756 12Sep17</b></p>	<p style="text-align: center;"><b>页码</b>  <b>Page</b>    12 of 14</p>
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7.5.4 清空剩余的显影液到专门的废水槽中。

Empty any unused Development Reagent into a chemical waste container.

7.5.5 在软件界面中选择对应的模板（A 中的 C）扫描并分析 CSA 猿猴测试板 A。

Scan and analyze the CSA: Simian Panel A Plate using the template designated in the C of A from the kit.

	<p style="text-align: center;"><b>CSA 猿猴测试板 A</b>  <b>CSA: Simian Panel A</b>  (产品号 Product Number 12-1212)  <b>用户使用说明 User Protocol</b></p>	<p style="text-align: center;">文本号  <b>Literature Number</b>    <b>L756 12Sep17</b></p>	<p style="text-align: center;">页码  <b>Page</b>    13 of 14</p>
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## 8.0 产品订购 Ordering Information

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	<p style="text-align: center;"><b>CSA 猿猴测试板 A</b>  <b>CSA: Simian Panel A</b>          (产品号 Product Number 12-1212)          用户使用说明 User Protocol</p>	<p style="text-align: center;">文本号  <b>Literature Number</b>    <b>L756 12Sep17</b></p>	<p style="text-align: center;">页码  <b>Page</b>            14 of 14</p>
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## 9.0 附录 A: 疑问解答 Appendix A: Troubleshooting

### 问题 Problem: 显影信号微弱 Weak Signal

#### 建议及原因 Suggested Causes & Solutions:

1. 不正确的实验温度——所有反应必须保证在 18- 30°C 下进行以达到最优效果。  
 Incorrect assay temperature – Reaction must occur at 18- 30°C for optimal results.
2. 蛋白质降解——确保使用新鲜准备的样品。  
 Protein degradation – use freshly prepared samples.
3. 显影剂添加过慢——快速添加显影剂到反应管中并马上盖上盖子。  
 Slow addition of the Development Reagent – immediately add the Development Reagent to reaction tube, and cap without hesitation.
4. 放□ 时间不正确——严格遵守使用说明书的放□ 时间。  
 Incorrect assay incubation time – follow protocol for proper incubation times.

### 问题 Problem: 背景信号过强 High Background

#### 建议及原因 Suggested Causes & Solutions:

1. SilverQuant 暴露于光线中过久——尽量避免 SilverQuant 试剂 A 和 B 暴露于光线中。在添加显影剂后马上盖上遮光盖。  
 SilverQuant chromogenic reagents were exposed to light for an extended period - SilverQuant Reagents A and B should have minimal exposure to direct light. Seal the plate immediately after the Development Reagent is added to the wells.

### 问题 Problem: 控制对照组无信号 No signal from detection controls

#### 建议及原因 Suggested Causes & Solutions:

1. 省略了用户使用说明书的某一步或试剂使用不当。  
 A step in the protocol was skipped or a reagent was mishandled.
2. 如果是阳性对照信号很弱，说明金标记抗猿猴 IgG 试剂没有添加或使用不当。  
 If a low signal is seen in the positive controls, the anti-simian IgG gold conjugate solution was possibly missing or mishandled.

### 问题 Problem: 背景信号不一致 Heterogeneous Background

#### 建议及原因 Suggested Causes & Solutions:

1. 冲洗/干燥过程中存在问题——水中含的杂质会留下“条状”图像。用高纯水再次冲洗并马上使用板式离心机干燥或者使用过滤空气或氮气（压力约 80 psi）轻轻吹干  
 Washing/Drying artifact – Salts in the wash buffer may leave “streaks” in the array image. Briefly rinse wells again with purified water and immediately dry by centrifugation or by applying an air or nitrogen stream at approximately 80 psi.
2. 测试板干燥后可能有灰尘沉淀。需要吹走或擦去孔内。  
 Dust may adhere to the well after it has been dried. It may be necessary blow/wipe off any dust that may have settled into a well.