

# Streptavidin Check&Go!

Applicable to: 4004-0030 30 Strips

Release 1. © EXPEDEON. 23/08/2018

## INTRODUCTION

*Streptavidin Check&Go!* is a quick and simple immunochromatography test that allows you to confirm the successful conjugation of streptavidin to your antibody without the need for any specialized or costly equipment. The key component of the kit is a nitrocellulose membrane containing a 'Test line' of immobilized Protein A and Protein G called a "half strip". Both Protein A and Protein G have a high affinity for the Fc region of a variety of IgG molecules (see Appendix). The "half strips" also contain an absorbent pad to promote and control the flow of sample through the nitrocellulose. The streptavidin-antibody conjugate is run on the Protein A/G strip together with 40nm InnovaCoat® GOLD Biotin as detection label. Biotin binds streptavidin with exceptionally high affinity and when the streptavidin-antibody conjugate flows along the nitrocellulose membrane, upon binding to the Protein A and Protein G on the T-line, a visible red line appears on the strip (see Figure 1).

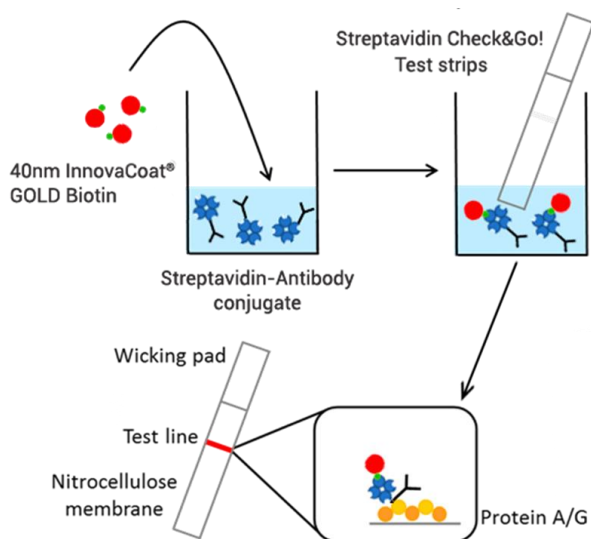


Figure 1.

## KIT CONTENTS

- 30 Protein A/G strips
- 1 vial of 40nm InnovaCoat® GOLD Biotin
- 1 vial of Positive Control
- 2 cryovials of 10x Running Buffer

**Not supplied:** 96-wells low binding plate, Bovine serum albumin (BSA)

## STORAGE AND SHIPPING

The kit is shipped at ambient temperature. Upon receipt, store the pot containing the strips at +4°C and the pot containing the 10x Running

Buffer, lyophilized Positive control and InnovaCoat® GOLD Biotin conjugate at -20°C.

## INSTRUCTIONS

After performing your Streptavidin-IgG conjugation reaction, you can visually check the success of the conjugation by simply running your sample on the strips as follows:

1. Dilute the 10x Running Buffer with distilled water down to 1x
2. Add 0.1% BSA (final concentration) to 1x Running Buffer
3. Reconstitute the 40nm InnovaCoat® GOLD Biotin with 150µl of 1x Running Buffer + 0.1% BSA to obtain 2 OD
4. Dilute your sample(s) in 1x Running Buffer + 0.1% BSA; you will need 10ul each test; the optimal conjugate concentration range is 250 - 15.6 ng/ml. It is recommended to run the samples in duplicate and include the positive control (see below)
5. For a single test mix 10ul of diluted streptavidin-antibody, 4ul of reconstituted InnovaCoat® GOLD Biotin 2 OD and 26ul of 1x Running Buffer + 0.1% BSA and mix through pipetting
6. Load 40µl/well of your mix in a 96-well non-sticky plate or a suitable container
7. Dip the strip in the well
8. Run for 10 minutes

Check the result by eye. A red line will become visible if the conjugation was successful.

The kit comes with a positive control consisting of a lyophilized streptavidin-rabbit IgG conjugate, which should be run separately on a strip as follows:

1. Reconstitute the vial in 300µl of 1x Running Buffer + 0.1% BSA
2. For a single run mix 10ul of positive control, 4ul of reconstituted InnovaCoat® GOLD Biotin 2 OD and 26ul of 1x Running Buffer + 0.1% BSA and mix through pipetting
3. Load 40µl/well of positive control
4. Dip the strip in the well
5. Run for 10 minutes

The positive control will produce a visible red line on the strip.

## APPENDIX

### Protein A and Protein G affinity for immunoglobulins

Species	Ig subclasses	Binding to Protein A	Binding to Protein G	
Rabbit	IgG	High	High	
	IgG <sub>1</sub>	High	High	
	IgG <sub>2</sub>	High	High	
	IgG <sub>3</sub>	No affinity	High	
Human	IgG <sub>4</sub>	High	High	
	IgA	Low	No affinity	
	IgD	Low	No affinity	
	IgE	Low	No affinity	
	IgM	Low	No affinity	
	Pig	IgG	High	High
		IgG <sub>1</sub>	Low/Medium	Medium
IgG <sub>2a</sub>		High	High	
Mouse	IgG <sub>2b</sub>	High	Medium	
	IgG <sub>3</sub>	Low/Medium	Medium	
	IgM	Low	No affinity	
	Goat	IgG	Low	High
Sheep	IgG	Low	High	
	IgG	Low	High	
Rat	IgG <sub>1</sub>	Low	Low/Medium	
	IgG <sub>2a</sub>	Low	High	
	IgG <sub>2b</sub>	Low	Low/Medium	
	IgG <sub>2c</sub>	Low	Low/Medium	
	IgM	Low	No affinity	

Low/no affinity for a specific IgG subclass may lead to low/no signal but the conjugate may be fine.

## RELATED PRODUCTS

Lightning-Link®-Streptavidin antibody labeling kit

[www.expedeon.com/products/immunoreagents/lightning-link-antibody-labeling-kits/biotin-streptavidin-labeling-kits/lightning-link-streptavidin/](http://www.expedeon.com/products/immunoreagents/lightning-link-antibody-labeling-kits/biotin-streptavidin-labeling-kits/lightning-link-streptavidin/)

Maleimide Activated Streptavidin

[www.expedeon.com/products/immunoreagents/maleimide-activated-labels-thiol-kits/maleimide-labels/](http://www.expedeon.com/products/immunoreagents/maleimide-activated-labels-thiol-kits/maleimide-labels/)

## TECHNICAL SUPPORT

For technical enquiries or for further information get in touch with our technical support team at: [www.expedeon.com/contact](http://www.expedeon.com/contact)

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