

# Spin column based Antibody Purification Kit

Cat. No. CSR-APK-10A

CSR-APK-10G

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[www.cosmobiousa.com](http://www.cosmobiousa.com)

## 【I】 Introduction

This spin-column type IgG antibody-purify kit consists of immobilized Protein A (#APK-10A) or Protein G (#APK-10G) on the solid phase of filter type monolithic silica with uniform continuous pores. Compared with conventional ones, this product can easily purify IgG antibodies for a shorter time (approximately 3 minutes). The column can be recycled up to 5 times<sup>1</sup> without diminishing of antibody binding capacity. Each can purify IgG antibodies up to 0.4 mg with Protein A and 0.3 mg with Protein G per column under more than 90% of recovery rate.

\*1: In case purified antibodies or culture supernatants are used, up to five replicates of the columns can be reused. However, if the sample contains a solid component such as protein in the serum, it may cause a clogging of the column, which may result in a decrease in the regeneration frequency and fluid permeability. Therefore, this product should be used after removal of the solid component by centrifugal removal or filter filtration. Also, the number of replays will vary depending on the sample type of the customer, so it is not responsible for our web.

## 【II】 Composition

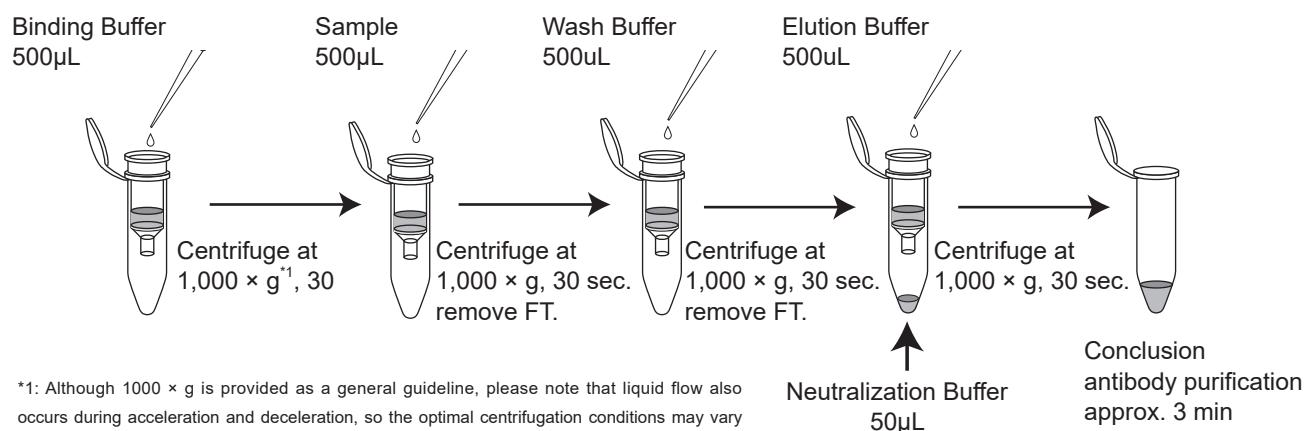
	Quantity
Monolithic silica-based Spin Column	10 columns
Sampling tube	10 tubes
Binding Buffer	30 mL
Wash Buffer	30 mL
Elution Buffer	30 mL
Neutralization Buffer	15 mL
Regeneration Buffer	30 mL



### 【III】 Cautions

1. Use the spin column with the cover opened.  
The sample will not pass through the monolithic silica smoothly when the cover of the spin column is closed as there will be a negative pressure generated in the spin column. Make sure the cover of the spin column is opened.
2. The spin column is filled with 20% ethanol solution. When reusing, be careful not to dry the column by filling it with 20% ethanol prepared with distilled water and store. Drying may degrade column performance.
3. Do not drop or bump the spin columns. Subjecting the spin columns to shocks may cause the monolithic silica seriously damaged.

### 【IV】 Typical Procedure



\*1: Although 1000 × g is provided as a general guideline, please note that liquid flow also occurs during acceleration and deceleration, so the optimal centrifugation conditions may vary depending on the instrument.

Please adjust the centrifugation settings using the following as indicators: 500 μL of ultrapure water should pass through within 30 seconds, and the gel should not be allowed to dry.

1. Adjust the pH of the antibody sample to around 7.0 in advance. If the sample amount is small, adjust to 500 μL with PBS etc.  
\*Before use, centrifuge the ethanol solution at 1,000 × g for 30 seconds and discard.
2. Add 500 μL of Binding Buffer to the column, centrifuge at 1,000 × g for 30 seconds and remove it.
3. Add 500 μL of antibody sample to the column, centrifuge at 1,000 × g for 30 seconds, discard flow-through (FT).  
\*2: When concentrating the antibody, centrifuge and remove FT each time, then add 500 μL of antibody sample to the column. Sequential runs may cause clogging, so wash the column with Wash Buffer every 2 to 3 addition of the sample.



4. Add 500  $\mu$ L of Wash Buffer to the column, centrifuge at 1,000  $\times$  g for 30 seconds, discard FT.
5. Add 50  $\mu$ L Neutralization Buffer to the sampling tube and set the column. Add 500  $\mu$ L<sup>\*3</sup> of Elution Buffer to the column and centrifuge at 1,000  $\times$  g for 30 seconds to recover the antibody sample.

\*3: Elution Buffer can be reduced to 100  $\mu$ L and eluted at high concentration.

In this case, add Neutralization Buffer to the sampling tube at the ratio; Neutralization Buffer : Elution Buffer =1: 10.

However, it may not be able to elute all the adsorbed IgG antibodies.

6. To regenerate the used spin column, add 500  $\mu$ L of Regeneration buffer to the used spin column and centrifuge for 30 seconds, and remove FT. Store the spin column with 20% ethanol and store it at 4 $^{\circ}$ . Do not allow the resin (silica monolith) to dry. Otherwise, the performance and quality of spin column may be deteriorated.

Column type	Recommended sample	
Protein G	Honoclonal antibody	Human IgG1, IgG2, IgG3, IgG4
		Mouse IgG1, IgG2a, IgG2b, IgG3
	Polyclonal antibody	Rabbit, Goat
Protein A	Honoclonal antibody	Human IgG1, IgG2, IgG4
		Mouse IgG2a, IgG2b, IgG3
	Polyclonal antibody	Rabbit

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