

EcoMag™ Quick IgG Purification Kit

Introduction

EcoMag™ Quick IgG Purification Kit is specifically designed for quick and efficient one-step purification of high purity of IgG from whole serum from various animal species with our unique superparamagnetic particles (Fig.1).

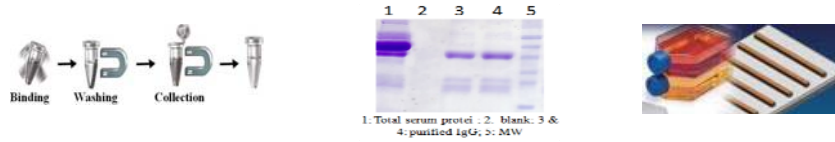


Fig.1

Feature and Advantages

- Mild Elution condition resulting high protein recovery with excellent preservation of antibody activity, unlike protein A, or protein G and protein A/G.
- Binding to IgG from various animal species
- Quick and easy-to-use one-step procedures; eliminates columns or filters, or laborious repeat pipetting or centrifugation,
- No dialysis after purification
- 85-90% pure IgG without dialysis
- Low cost; easily adjusts for sample size and automation

Product Specificities	
Particle Size	~ 2-5 μ m
Magnetization	~40 EMU/g
Type of Magnetization	Superparamagnetic
Effective Density	2.5 g/ml
Concentration	5 mg/ml (50 mM sodium phosphate, pH 8.5, 20% Ethanol)
Binding Capacity	~ 5 mg IgG / ml of Particles
Storage	Store at 4°C upon receipt

Order Information	
Cat#	Description
MF-101 (Can purify up to 50 mg IgG)	<ul style="list-style-type: none"> • 10 ml BcMag™ Quick IgG Pure Magnetic Particle • 2x 64 ml 10x Binding/Wash Buffer • 20 ml 5x Elution Buffer
MF-102 (Can purify up to 250 mg IgG)	<ul style="list-style-type: none"> • 50 ml BcMag™ Quick IgG Pure Magnetic Particle • 3x 220 ml 10x Binding/Wash Buffer • 100 ml 5x Elution Buffer
MF-103 (Can purify up to 500 mg IgG)	<ul style="list-style-type: none"> • 100 ml BcMag™ Quick IgG Pure Magnetic Particle • 6x 220 ml 10x Binding/Wash Buffer • 200 ml 5x Elution Buffer
Large volume available, please call for quotation	

Protocol

Note: *Equilibrate all reagents and sample to room temperature because temperature, pH, ionic strength and specific salts affect binding and elution efficiency and sample purity. The protocol can be properly scaled up or down.*



Materials Required

- **Magnetic Separator** (for manual operation): Based on sample volume, user can choose one of the following magnetic Separators from Bioclone Inc: BcMag separator-2 for holding two individual 1.5 ml centrifuge tubes (Cat.# MS-01); BcMag separator-6 for holding six individual 1.5 ml centrifuge tubes (Cat. # MS-02); BcMag separator-24 for holding twenty-four individual 1.5-2.0 ml centrifuge tubes (Cat. # MS-03); BcMag separator-50 for holding one 50 ml centrifuge tube, one 15 ml centrifuge tube, and four individual 1.5 ml centrifuge tubes (Cat.# MS-04); BioMag® Flask Separator for 500 ml (Polysciences Inc, Cat.# 86001-10).

A. Sample preparation

1. Dilute whole serum with equal volume of 2x **Binding/Wash Buffer** and mix well.

B. Magnetic Particles Preparation

1. Shake the bottle to completely resuspend the magnetic particles.
2. Transfer desired amount of magnetic particles to a centrifuge tube (**Note:** *1 ml of BcMag™ Quick IgG Pure Magnetic particles per 2.5 ml of whole serum is recommended. The volumes can be scaled accordingly*). Place the tube on the magnetic separator for 1-3 minutes until the supernatant becomes clear. Remove the supernatant while the tube remains on the separator.
3. Remove the tube and wash the particles thoroughly with 10 particle volumes of 1x **Binding/Wash buffer** for three times as described in step 2.
4. Resuspend the beads with with 10 particle volumes of 1x **Binding/Wash buffer**.

C. Sample Binding

1. Add the washed particles from step B.4 to the sample. Completely resuspend the particles and leave at room temperature for 10-30 minutes with gentle rotation.
2. Place the tube on a magnetic separator for 1-3 minutes. Remove the supernatant while the tube remains on the separator.
3. Remove the tube from the separator and wash the particles with 10 particle volumes of Binding/Wash Buffer. Place the tube on the magnetic separator for 1-3 minutes. Remove the supernatant while the tube remains on the separator.
4. Repeat step 3 for five times

D. IgG Elution

1. Remove the tube from the separator and resuspend the particles with 10 particle volumes of Elution buffer to elute IgG. Place the tube on the magnetic separator for 1-3 minutes. Remove the supernatant while the tube remains on the separator.