

Biotin Labelling Kit

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Introduction

The OriGene IgG biotinylation kit utilizes a novel chemistry to generate highly reproducible biotinylated IgG with a simple procedure.

Features

- Room temperature-stable active biotinylation reagent.
- Pre-measured active biotinylation reagent coated onto a tube surface.
- Can be used with up to 10 mg/ml (1%) BSA as a carrier protein.
- Completely scalable: conjugate anywhere from 0.1 to 1 gram IgG per reaction.
- Highly efficient Biotin incorporation.
- Purification not usually required.

Products and Contents

- Cat# AR100085, 0.2 mg (2 tubes x 0.1mg)
- Cat# AR100086, 0.3 mg (3 tubes x 0.1mg)
- Cat# AR100087, 1 mg (10 tubes x 0.1mg)
- Cat# AR100088, 1 mg (1 tube x 1mg)
- Cat# AR100089, 10 mg (1 tube x 10mg)

Components	Storage Conditions
Bio-Link Reagent for labeling 0.1 mg , 1.0 or 10 mg IgG	2-8°C or room temperature - in container with dessicant
Quenching Reagent	2-8°C
100 mg/ml BSA (with 0.05% Sodium Azide)	2-8°C

Additional Reagents Required

None

Storage

- Store vials containing the BioLink Reagent at room temperature. Keep the vials in the white plastic jar containing dessicant packets.
- Store Quenching Reagent at 2-8°C.
- Store 100 mg/ml BSA solution at 2-8°C.

Shelf Life

The performance of the product is guaranteed for a minimum of 12 months when stored as directed.

IgG Amount and Concentration and Buffers

The IgG to be biotinylated should be at a concentration 0.5 - 2.0 mg/ml in 1X PBS, pH 7.2 – 7.5. The IgG solution may contain up to 10 mg/ml BSA and up to 0.05% sodium azide.

CONJUGATION PROCEDURE for 0.1 mg of IgG

1. Add IgG solution to the 1.5 ml screw-cap tube.
2. Vortex gently for 10 seconds, then shake solution down to the bottom.
3. Place the tube on a shaker or rotator and mix at room temperature for 15 minutes. Longer incubations (up to 2 hours) will also give acceptable results.
4. Optional: remove excess biotin from the reaction by size exclusion chromatography (see Recommended Accessories section for spin desalting columns). Then proceed to step 8 – quenching is not necessary.
5. Add 10 μ L of Quenching Reagent to the tube.
6. Vortex gently for 5 seconds, then shake down to the bottom.
7. Place the tube on a shaker or rotator and mix at room temperature for 1-2 hours.
8. Optional: add 100 mg/ml BSA solution to achieve the desired final concentration of BSA.
9. Optional: Add glycerol to a final concentration of 40-50%.
10. Store biotinylated IgG at 2-8°C or -20°C.

CONJUGATION PROCEDURE for 1 mg of IgG

1. Add IgG solution to the 5 ml screw-cap tube.
2. Vortex gently for 10 seconds, then shake solution down to the bottom.
3. Place the tube on a shaker or rotator and mix at room temperature for 15 minutes. Longer incubations (up to 2 hours) will also give acceptable results.
4. Optional: remove excess biotin from the reaction by size exclusion chromatography (see Recommended Accessories section for spin desalting columns). Then proceed to step 8 – quenching is not necessary.
5. Add 100 μ L of Quenching Reagent to the tube.
6. Vortex gently for 5 seconds, then shake down to the bottom.

7. Place the tube on a shaker or rotator and mix at room temperature for 1-2 hours.
8. Optional: add 100 mg/ml BSA solution to achieve the desired final concentration of BSA.
9. Optional: Add glycerol to a final concentration of 40-50%.
10. Store biotinylated IgG at 2-8°C or -20°C.

RECOMMENDED ACCESSORIES

To remove excess biotin from the biotinylated IgG - Order from ThermoFisher:

Sample Size	Description	Cat #
2 – 12 µL	Zeba Spin Desalting Columns, Micro (75µL), 7K MWCO	89877, 89878
30 - 130 µL	Zeba Spin Desalting Columns, 0.5 mL, 7K MWCO	89882, 89883
200 – 700 µL	Zeba Spin Desalting Columns, 2 mL, 7K MWCO	89889, 89890
500 – 2000 µL	Zeba Spin Desalting Columns, 5 mL, 7K MWCO	89891, 89892
700 – 4000 µL	Zeba Spin Desalting Columns, 10 mL, 7K MWCO	89893, 89894

For concentrating IgG before biotinylation or for concentrating the final biotinylated IgG – Order from MilliporeSigma:

Sample Size	Description	Cat #
Up to 500 µL	Amicon Ultra-0.5 Centrifugal Filter Unit with Ultracel-50 membrane	Z740176
Up to 2 mL	Amicon Ultra-2 Centrifugal Filter Unit with Ultracel-50 membrane	UFC205024
Up to 4 mL	Amicon Ultra-4 Centrifugal Filter Unit with Ultracel-50 membrane	UFC805008
Up to 15 mL	Amicon Ultra-15 Centrifugal Filter Unit with Ultracel-50 membrane	Z648000