

## ReadiLink™ Rapid mFluor™ Blue 570 Antibody Labeling Kit \*Microscale Optimized for Labeling 50 µg Antibody Per Reaction\*

 Catalog number: 1120  
 Unit size: 2 Labelings

Component	Storage	Amount
Component A: mFluor™ Blue 570	Freeze (< -15 °C), Minimize light exposure	2 vials (One vial is for 50 µg protein)
Component B: Reaction Buffer	Freeze (< -15 °C), Minimize light exposure	1 vial (20 µL)
Component C: TQ™-Dyed Quench Buffer	Freeze (< -15 °C), Minimize light exposure	1 vial (20 µL)

### OVERVIEW

AAT Bioquest's mFluor™ dyes are developed for flow cytometry-focused applications. These dyes have large Stokes Shifts, and can be well excited by the laser lines of flow cytometers (e.g., 405 nm, 488 nm and 633 nm). mFluor™ Blue 570 dyes have fluorescence excitation and emission maxima of ~553 nm and ~570 nm respectively. Like RPE protein, it has a broad absorption spectrum, making its conjugates readily excitable by 488 nm blue laser. These spectral characteristics make mFluor™ Blue 570 an excellent alternative to RPE labeling protein. mFluor™ Blue 570 is a small organic molecule that is much easier to use than the RPE labeling protein. mFluor™ Blue 570 SE is reasonably stable and shows good reactivity and selectivity with protein amino groups. This kit has all the essential components to perform two separate labeling reactions with no column purification needed. Each of the two vials of mFluor™ Blue 570 provided in the kit is optimized for labeling ~50 µg antibody. mFluor™ Blue 570 antibody labeling kit provides a convenient method to label small amounts of monoclonal, polyclonal antibodies or other proteins (>10 kDa) with the mFluor™ Blue 570 SE dye.

### AT A GLANCE

#### Important

Warm all the components and centrifuge the vials briefly before opening, and immediately prepare the required solutions before starting your conjugation. The following protocol is for recommendation.

### PREPARATION OF WORKING SOLUTION

#### Protein working solution (Solution A)

For labeling 50 µg of protein (assuming the target protein concentration is 1 mg/mL), mix 5 µL (10% of the total reaction volume) of Reaction Buffer (Component B) with 50 µL of the target protein solution.

**Note** If you have a different protein concentration, adjust the protein volume accordingly to make ~50 µg of protein available for your labeling reaction.

**Note** For labeling 100 µg of protein (assuming the target protein concentration is 1 mg/mL), mix 10 µL (10% of the total reaction volume) of Reaction Buffer (Component B) with 100 µL of the target protein solution.

**Note** The protein should be dissolved in 1X phosphate buffered saline (PBS), pH 7.2 - 7.4; if the protein is dissolved in glycine buffer, it must be dialyzed against 1X PBS, pH 7.2 - 7.4, or use Amicon Ultra-0.5, Ultracel-10 Membrane, 10 kDa (cat# UFC501008 from Millipore) to remove free amines or ammonium salts (such as ammonium sulfate and ammonium acetate) that are widely used for protein precipitation.

**Note** Impure antibodies or antibodies stabilized with bovine serum albumin (BSA) or gelatin will not be labeled well.

**Note** For optimal labeling efficiency, a final protein concentration range of 1 - 2 mg/mL is recommended, with a significantly reduced conjugation efficiency at less than 1 mg/mL.

### SAMPLE EXPERIMENTAL PROTOCOL

### Run conjugation reaction

1. Add the protein working solution (Solution A) to ONE vial of labeling dye (Component A), and mix them well by repeatedly pipetting for a few times or vortex the vial for a few seconds.

**Note** If labeling 100 µg of protein, use both vials (Component A) of labeling dye by dividing the 100 µg of protein into 2 x 50 µg of protein and reacting each 50 µg of protein with one vial of labeling dye. Then combine both vials for the next step.

2. Keep the conjugation reaction mixture at room temperature for 30 - 60 minutes.

**Note** The conjugation reaction mixture can be rotated or shaken for longer time if desired.

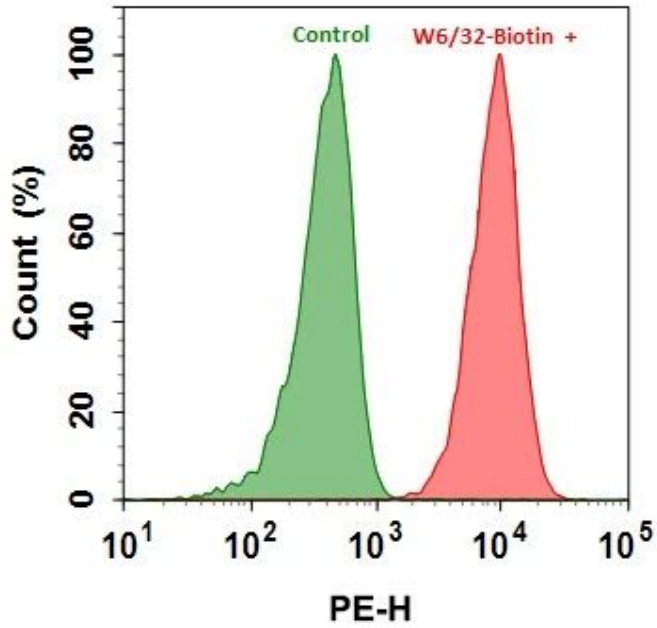
### Stop Conjugation reaction

1. Add 5 µL (for 50 µg protein) or 10 µL (for 100 µg protein) which is 10% of the total reaction volume of TQ-Dyed Quench Buffer (Component C) into the conjugation reaction mixture; mix well.
2. Incubate at room temperature for 10 minutes. The labeled protein (antibody) is now ready to use.

### Storage of Protein Conjugate

The protein conjugate should be stored at > 0.5 mg/mL in the presence of a carrier protein (e.g., 0.1% bovine serum albumin). For longer storage, the protein conjugates could be lyophilized or divided into single-used aliquots and stored at ≤ -20°C.

### EXAMPLE DATA ANALYSIS AND FIGURES



**Figure 1.** HL-60 cells were stained with (red) or without (green) 1 µg/mL anti-human HLA-ABC-Biotin (W6/32 mAb). Cells were then incubated with streptavidin labeled using the ReadiLink™ Rapid mFluor™ Blue 570 Antibody Labeling Kit (Cat No. 1120). The fluorescence signal was monitored using ACEA NovoCyte flow cytometer in the PE channel.

**DISCLAIMER**

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