

## ReadiLink™ Rapid Cy5 Antibody Labeling Kit

### \*Microscale Optimized for Labeling 50 µg Antibody Per Reaction\*

Catalog number: 1292  
Unit size: 2 Labelings

Component	Storage	Amount
Component A: Cy5	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

Cy5 is one of the most popular fluorescent labeling dyes for preparing orange-red fluorescent bioconjugates. However, most of the commercial Cy5 labeling kits require intensive hands-on time. This Cy5 ReadiLink™ labeling kit is one of the most robust protein labeling kits for preparing Cy5-labeled antibody conjugates or other protein conjugates. It essentially only requires 2 simple mixing steps without a column purification required. The kit provides all the essential components for labeling ~2x50 µg antibody. Each of the two vials of Cy5 dye provided in the kit is optimized for labeling ~50 µg antibody. This Cy5 protein labeling kit provides a convenient method to label monoclonal, polyclonal antibodies or other proteins (>10 kDa).

#### 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.

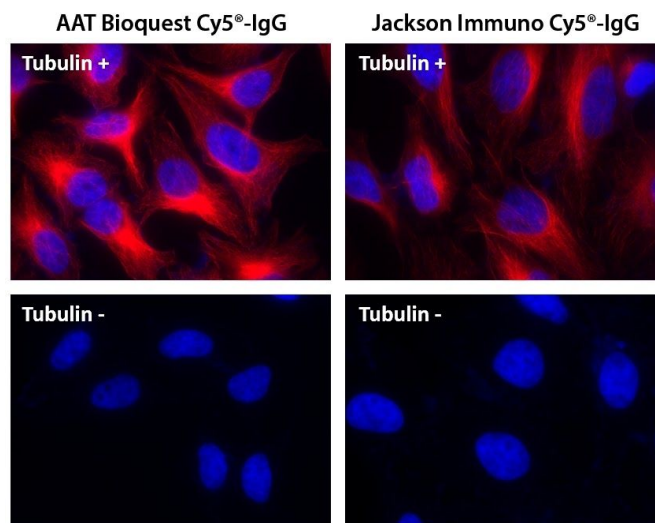
##### Stop Conjugation reaction

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.** HeLa cells were incubated with (Tubulin+) or without (Tubulin-) mouse anti-tubulin followed by AAT's Cy5<sup>®</sup> goat anti-mouse IgG conjugate (Red, Left) or Jackson's Cy5<sup>®</sup> goat anti-mouse IgG conjugate (Red, Right), respectively. Cell nuclei were stained with Hoechst 33342 (Blue, Cat# 17530).

**DISCLAIMER**

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