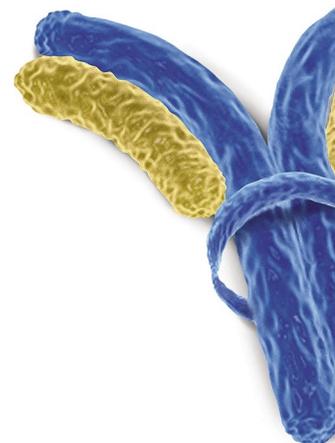


Quantifiable Biotinylation Reagent

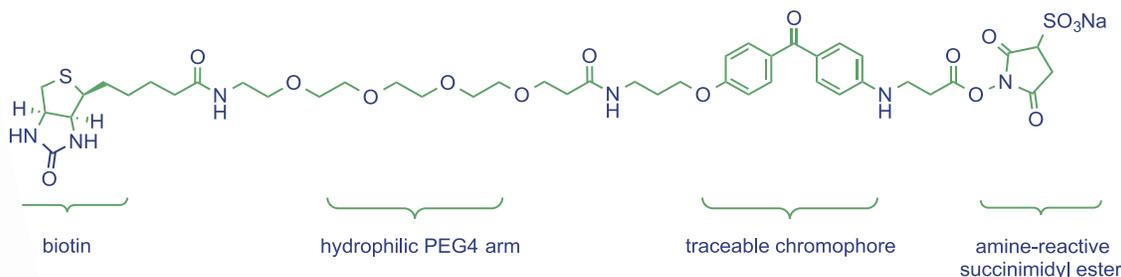
- Low protein recovery?
- Lot-to-lot inconsistency?
- Lost of protein activity?



All above issues might be a result of over-biotinylation

A major shortfall of traditional biotinylation reagents is the lack of a simple and nondestructive means of measuring labeling efficiency. Unfortunately, existing protocols and commercial kits suffer from a number of shortcomings that limit their usefulness.

QuántiLink™ Biotin labeling reagents comprise a family of the most advanced biotinylation reagents with built-in signal quantification capability. These reagents contain UV signature ($\epsilon_{350} = 19,500 \text{ M}^{-1}\text{cm}^{-1}$) that enables direct and nondestructive quantification of total incorporated biotin by means of spectroscopic A_{280}/A_{350} measurement of a modified protein.



QuántiLink™ Biotinylation reagents have been carefully engineered to provide researchers with maximum control and reproducibility over the biotin labeling process while preserving highest binding affinity to streptavidin. Available with short PEG4 linker activated with NHS ester and water-soluble sulfo-NHS ester groups. For labeling of sensitive proteins **QuántiLink™ Biotin-PEG12-NHS Ester** is a reagent of choice

Application Example

Four polyclonal Goat IgG samples (100 μ L each @ 2 mg/mL) were labeled at room temperature for 1 hour using a 0-fold, 5-fold, 10-fold, or 20-fold mole-equivalent excess of **QuántiLink™ Biotin NHS ester** over antibody. Excess labeling reagent was then removed using a desalt spin column. Aliquots from each sample were diluted in PBS (1:5) and scanned on a spectrophotometer as illustrated in Figure 1. The degree of biotin labeling (DOL) was calculated using the A_{280} and A_{350} values with the following equations:

$$DOL = \frac{\text{moles biotin}}{\text{moles antibody}}$$

$$\text{moles biotin} = \frac{A_{350}}{\epsilon_{350}} = \frac{A_{350}}{19,500}$$

$$\text{moles antibody} = \frac{A_{280} - A_{350} \times 0.45}{\epsilon_{280}} = \frac{A_{280} - A_{350} \times 0.45}{204,000}$$

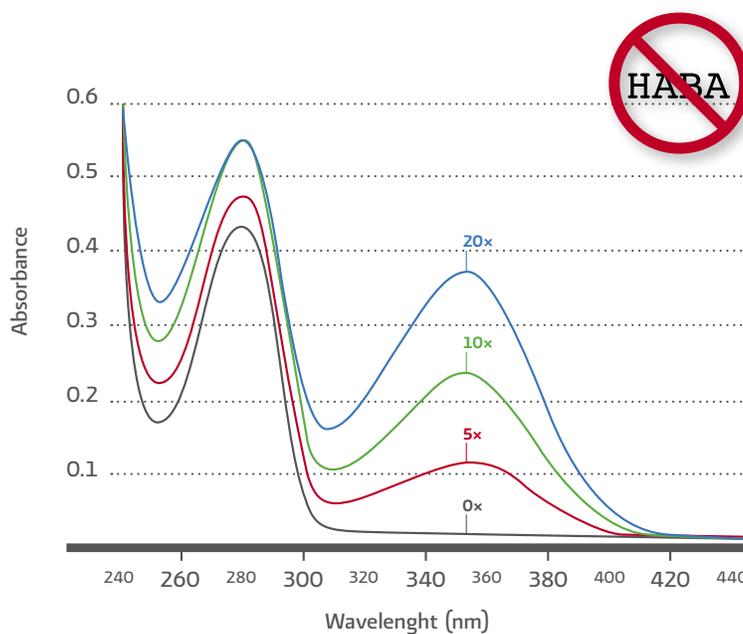


Figure 1. Superimposed absorbance spectra of **QuántiLink Biotin** labeled Goat IgG at the indicated mole-equivalent excess of reagent over antibody (0 \times , 5 \times , 10 \times , 20 \times).

Degree of Labeling Calculator

is available at www.clickchemistrytools.com

Ordering Information

Product	Quantity	Catalog Number	Price
QuántiLink™ Biotin Sulfo-NHS Ester	1 labeling kit	1210-K	\$295.00
QuántiLink™ Biotin Sulfo-NHS Ester	4 \times 1 mg	1210-1	\$149.00
QuántiLink™ Biotin-PEG12-NHS Ester	1 labeling kit	1211-K	\$295.00
QuántiLink™ Biotin-PEG12-NHS Ester	4 \times 1 mg	1211-1	\$149.00
QuántiLink™ Biotin-PEG4-NHS Ester	10 mg	1209-10	\$119.00
QuántiLink™ Biotin-PEG4-NHS Ester	25 mg	1209-25	\$295.00

For a complete list of biotin labeling products, visit clickchemistrytools.com