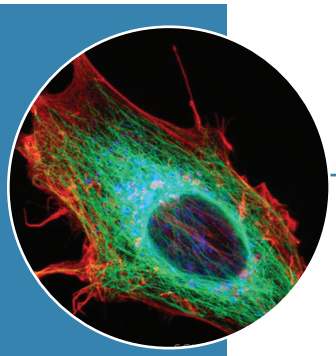

DyLight® Fluorescent Dyes

DyLight® Fluorescent Dyes are high-intensity, photostable fluorescent tags Leinco Technologies uses to label its antibodies and secondary reagents. The DyLight® Fluorescents are available for use in fluorescence microscopy, flow cytometry, Western blotting, ELISA, high-content screening and other array platforms.

Why use DyLight® Fluorophores?

For years, researchers have used dyes like fluorescein, rhodamine, Cy3 and Cy5 in a wide variety of applications. However, these dyes have limitations (such as photobleaching) for use in microscopy and flow cytometry which both require exposure to an intense light source. Certain characteristics of the DyLights® make them a highly effective alternative to these dyes in many applications.

- **Excitation and emission properties match output and detection wavelengths of common instrumentation**
- **Higher photostability / Less pH-sensitive**
- **Little spectral overlap of wavelengths**

Excitation and Emission Properties

The DyLight® Fluorophores are spectrally similar to other dyes, and their excitation and emission properties match the output and detection wavelengths of most fluorescence instrumentation. The absorption spectra of DyLights® carried by Leinco Technologies range from 400–646 nm, covering the entire visible light spectrum and several key near-infrared and infrared wavelengths *(See Figure 1 and Table 1)*.

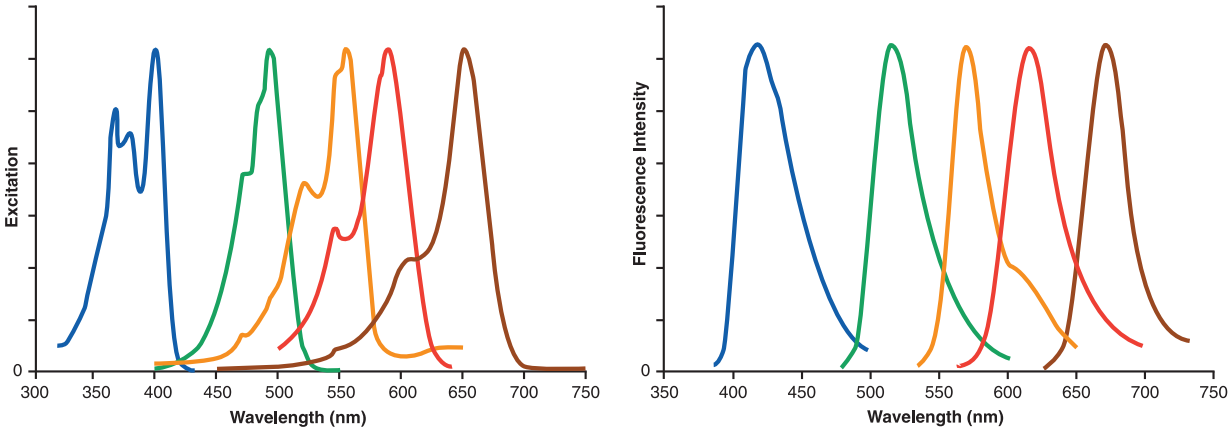

Figure 1. – Excitation (left) and emission (right) spectra of DyLight® fluorescent dyes conjugated to affinity-purified secondary antibodies. This figure illustrates the relative shape and position of each fluorophore in the peak area of its excitation and emission after antibody conjugation.

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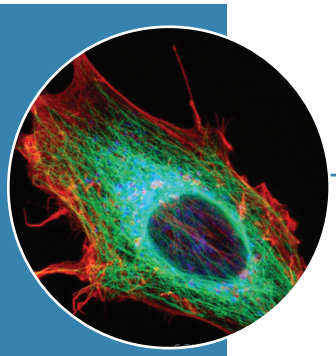


DyLight® Fluorescent Dyes (Cont.)

Excitation and Emission Properties Continued

Fluorophore	Absorption Max. (nm)	Emission Max. (nm)
DyLight® 488	493	518
DyLight® 549	562	576
DyLight® 594	593	618
DyLight® 650	654	673

Table 1. – Peak wavelengths of excitation and emission maxima for DyLight® fluorophores available through Leinco Technologies. Peaks may vary slightly depending on the instrumentation used in each laboratory.

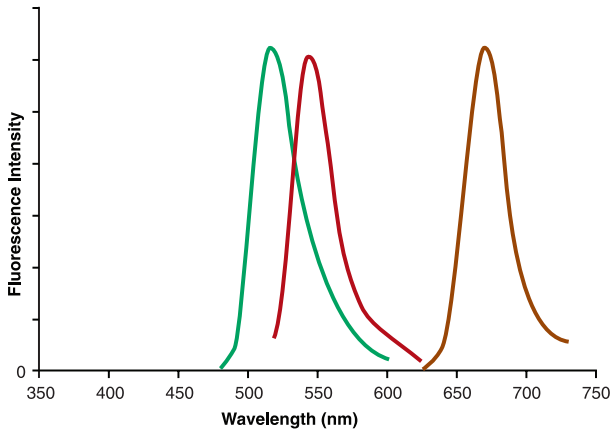
Higher Photostability

The DyLights® show a higher fluorescence strength than comparable dyes like *Alexa Fluor, CyDye* and *LI-COR* in most applications. They also maintain greater photostability and are less pH-sensitive. These characteristics allow more time for image capturing.

Low Spectral Overlap

Another advantage of the DyLight® Fluorophores is the low spectral overlap of wavelengths. By using a combination of these dyes, it is possible to achieve highly effective 4-color imaging with a maximum separation of colors.

Figure 2. – **DyLight® 488, Rhodamine,** and **DyLight® 650** emission spectra**.** This figure shows the relative shape and position of each fluorophore in the area of its emission peak after antibody conjugation.



For more information on ordering DyLight® Fluorescent Dyes, contact Leinco Technologies today at **(800) 538-1145** or online at **Leinco.com**.

DyLight® is a trademark of Thermo Fisher Scientific Inc. and its subsidiaries.