**Lectin PHA-L Conjugates**

**Quick Facts**

**Storage upon receipt:**
- ≤–20°C
- Desiccate
- Protect from light

**Abs/Em:** See Table 1

**Introduction**

Lectins are oligomeric proteins with saccharide-binding sites that can recognize and bind particular glycoconjugates. The lectin phytohemagglutinin-L (PHA-L), which is isolated from *Phaseolus vulgaris* (red kidney bean), is strongly inhibited by N-acetylglucosamine \( \beta (1\rightarrow2) \) mannopyranosyl residues.\(^1\)

PHA-L exists as a tetramer with a molecular weight of approximately 120,000 daltons. This lectin has been shown to agglutinate leukocytes and induce mitogenic activity in T-lymphocytes\(^1,2\) and has also been used as an anterograde tracer for the study of neuronal pathways.\(^3\)

Fluorescent lectins are versatile probes with diverse applications, including detection of cell surface and intracellular glycoconjugates by microscopy and flow cytometry, localization of glycoproteins in gels, precipitation of glycoproteins in solution and agglutination of specific cell types.\(^1\) Molecular Probes offers several Alexa Fluor\(^®\) dye conjugates of lectin PHA-L; Table 1 provides a summary of absorption and emission maxima for these conjugates.

**Contents and Storage**

The fluorescent conjugates of lectin PHA-L are supplied in unit sizes of 1 mg, lyophilized from 0.5 mL phosphate-buffered saline (PBS), pH 7.2. When stored desiccated at ≤–20°C, these products are stable for at least one year. A 2 mg/mL solution can be prepared by dissolving the contents of one vial in 0.5 mL of H\(_2\)O. Solutions can be stored at 2–6°C for approximately three months. For longer storage, divide the solution into aliquots and freeze at ≤–20°C. PROTECT FROM LIGHT. AVOID REPEATED FREEZING AND THAWING OF SOLUTIONS.

**Applications and Working Concentrations**

Due to the diversity of potential applications, please consult the literature for appropriate working concentrations. The concentrations in Table 2 are recommended starting ranges for some of the more common applications. However, because staining conditions will vary with the application, optimal concentrations should be determined empirically.

It is a good practice to centrifuge the protein conjugate solution briefly in a microcentrifuge before use; only the supernatant should then be added to the experiment. This step will eliminate any protein aggregates that may have formed during storage, thereby reducing nonspecific background staining.

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**References**

Product List  Current prices may be obtained from our Web site or from our Customer Service Department.

<table>
<thead>
<tr>
<th>Cat #</th>
<th>Product Name</th>
<th>Unit Size</th>
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<tbody>
<tr>
<td>L-11270</td>
<td>lectin PHA-L from <em>Phaseolus vulgaris</em> (red kidney bean), Alexa Fluor&lt;sup&gt;®&lt;/sup&gt; 488 conjugate</td>
<td>1 mg</td>
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<tr>
<td>L-32455</td>
<td>lectin PHA-L from <em>Phaseolus vulgaris</em> (red kidney bean), Alexa Fluor&lt;sup&gt;®&lt;/sup&gt; 568 conjugate</td>
<td>1 mg</td>
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<tr>
<td>L-32456</td>
<td>lectin PHA-L from <em>Phaseolus vulgaris</em> (red kidney bean), Alexa Fluor&lt;sup&gt;®&lt;/sup&gt; 594 conjugate</td>
<td>1 mg</td>
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<tr>
<td>L-32457</td>
<td>lectin PHA-L from <em>Phaseolus vulgaris</em> (red kidney bean), Alexa Fluor&lt;sup&gt;®&lt;/sup&gt; 647 conjugate</td>
<td>1 mg</td>
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Contact Information

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