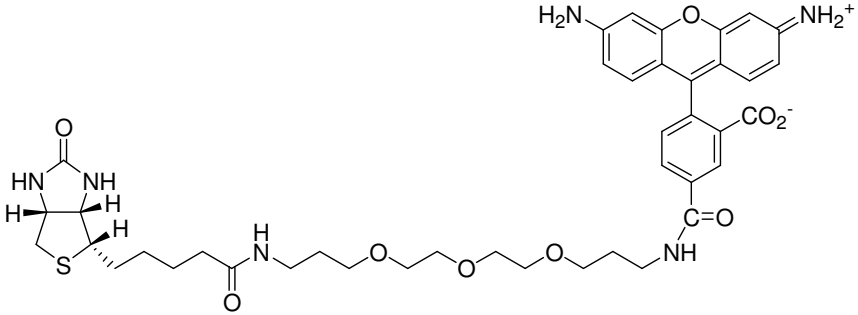


### Instruction Manual

|                                       |   |
|---------------------------------------|---|
| Catalog Number                        | PK-CA707-80022  |
| Description                           | Biotin-Rhodamine 110 has been developed as an alternative to Biotin-4-fluorescein (Cat.No. PK-CA707-90062) and Fluorescein-Biotin (Cat.No. PK-CA707-80019), both of which have been used for detection of biotin binding sites and the degree of biotinylation of proteins, and for the measurement of avidin and streptavidin in crude biofluids. In addition, biotin-rhodamine 110 can be used as a polar tracer to study the morphology of cells, similar to the use of Lucifer Yellow cadaverine biotin-X (Cat.No. PK-CA707-80017). The dye rhodamine 110 (or carboxyrhodamine 110) has absorption and emission wavelengths similar to those of fluorescein. However, the spectra and fluorescent quantum yield of rhodamine 110 are relatively unaffected by pH change (pH 4-9), whereas the fluorescence of fluorescein is significantly reduced at acidic pH. Moreover, rhodamine 110 is much more photostable than fluorescein, making biotin-rhodamine 110 a better choice for studies where prolonged exposure to light may be necessary. |
| Quantity                              | 5 mg  |
| Excitation / Emission Maxima          | $\lambda_{exc}$ / $\lambda_{em}$ : 509/525 nm;<br>Extinction coefficient = 90,000   |
| Molecular Structure                   |    |
| Molecular Weight / Molecular Formula  | 802.94 Da; C <sub>41</sub> H <sub>50</sub> N <sub>6</sub> O <sub>9</sub> S  |
| Purity                                | >90% (as determined by HPLC)  |
| Appearance / Formulation / Solubility | Orange red solid; soluble in DMF or DMSO.   |
| Storage & Stability                   | Store desiccated at -20°C. Protect from light, especially when in solution.   |
| Applications                          | See Description   |
| References                            | NA  |
| Caution                               | Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.   |

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