

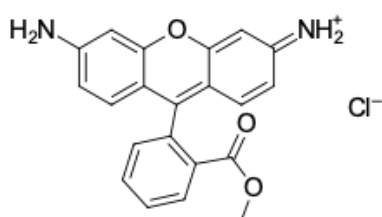
## LumiTracker® Mito Rhodamine 123

<http://www.lumiprobe.com/p/rhodamine-123-mitochondrial-dye>

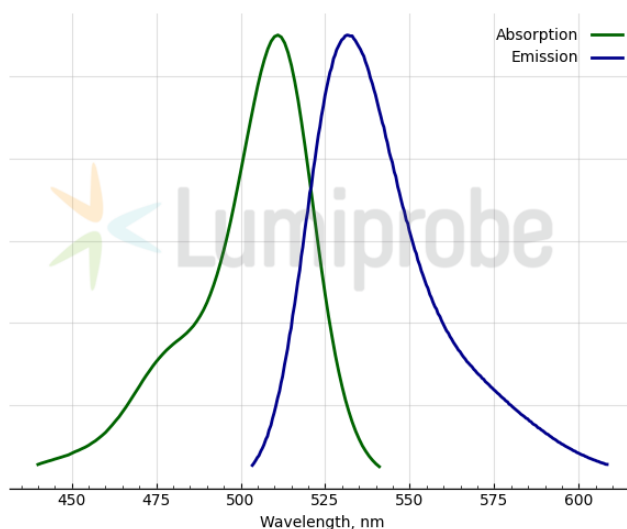
Rhodamine 123 (Rh123) is a cationic green-fluorescent xanthene dye used to monitor membrane polarization in mitochondria and bacteria in live cell assays.

The dye distributes according to the negative potential of the membrane. Loss of potential will result in loss of the dye and, therefore, the fluorescence intensity. Like [TMRE](#), Rhodamine 123 can be used to study mitochondrial function changes and cell viability in response to stimuli or pharmaceuticals of interest.

Rhodamine 123 is also used as a tracer dye to determine the rate and direction of membrane transport.



**Structure of Rh123**



**Absorbance and emission spectra of Rh123**

### General properties

|                         |  |
|-------------------------|--|
| Appearance:             | brown crystals   |
| Mass spec M+ increment: | 345.30   |
| Molecular weight:       | 380.83   |
| CAS number:             | 62669-70-9   |
| Molecular formula:      | C <sub>21</sub> H <sub>17</sub> ClN <sub>2</sub> O <sub>3</sub>  |
| Quality control:        | NMR <sup>1</sup> H and HPLC-MS (95+%)  |
| Storage conditions:     | 24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.  |
| Legal statement:        | This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products. |

### Spectral properties

|  |       |
|--|-------|
| Excitation/absorption maximum, nm:         | 511   |
| ε, L·mol <sup>-1</sup> ·cm <sup>-1</sup> : | 86000 |
| Emission maximum, nm:                      | 531   |
| Fluorescence quantum yield:                | 0.98  |