



M · T · T · I

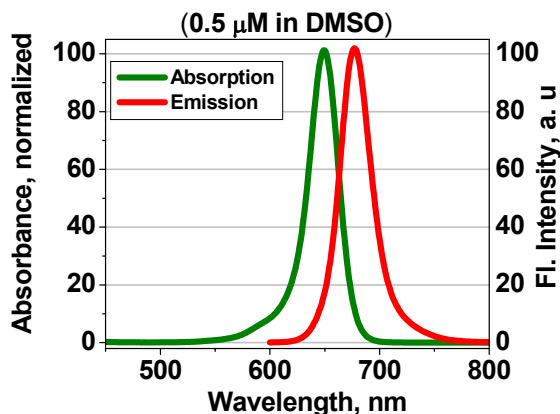
[www.mtarget.com](http://www.mtarget.com) • tel: 610 738 7938 • email: [briangray@mtarget.com](mailto:briangray@mtarget.com)

**Catalog Number: SR-1001**

**Product Name: SRfluor™ 680 Phenyl**

**Product Description:** A lipophilic far-red emitting dye (Figure 1), based upon the squaraine rotaxane family of dyes, which accumulates at lipophilic sites within live cells.

*Figure 1: SRfluor™-680 Phenyl Absorbance and Fluorescence Emission Spectra (abs max = 650 nm; em max = 678 nm in DMSO)*



**Product size:** 1 mg of crystalline green powder.

**Molecular Weight:** 1158

**Product Purity:** >95% by HPLC

**Extinction Coefficient (DMSO):** 297,780 cm<sup>-1</sup>M<sup>-1</sup> (650 nm).

**Storage/Stability:** Solid should be stored in the dark at room temperature. Solutions in DMSO should be stored in the dark at 0-4 °C and are found to be stable for at least 1 month.

#### **Applications:**

SRfluor™-680 Phenyl has been found to be 5-20X brighter compared with cyanines, Alexa® and Atto dyes and also have improved chemical and photochemical stability (1-3). When applied to cells, it rapidly accumulates at lipophilic sites inside the cell such as endoplasmic reticulum and intracellular lipid droplets without affecting cell viability and growth (1).

### Additional Information

- 1mg of SRfluor™-680 Phenyl can be dissolved in 1.73 mL of DMSO by heating at 40° C and sonicating to provide a 0.5mM stock solution.
- SRfluor™-680 Phenyl can be efficiently excited with 633nm and 647nm laser lines and detected using a standard filter set-up for Cy5.

### References:

- (1) Johnson, J. R.; Fu, N.; Arunkumar, E.; Leevy, W. M.; Gammon, S. T.; Piwinica-Worms, D.; Smith, B. D. Squaraine Rotaxanes: Superior Substitutes for Cy-5 in Molecular Probes for Near-Infrared Fluorescence Cell Imaging *Angew. Chem. Int. Ed.* **2007**, *46*, 5528.
- (2) Arunkumar, E.; Fu, N.; Smith, B. D. Squaraine-Derived Rotaxanes: Highly Stable, Fluorescent Near-IR Dyes. *Chem.-Eur. J.* **2006**, *12*, 4684.
- (3) Arunkumar, E.; Forbes, C. C.; Noll, B. C.; Smith B. D. Squaraine-Derived Rotaxanes: Sterically Protected Fluorescent Near-IR Dyes *J. Am. Chem. Soc.* **2005**, *127*, 3288.

SRfluor™ is a trademark of Molecular Targeting Technologies, Inc.

Alexa® is a trademark of Molecular Probes, a subsidiary of Invitrogen.