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Catalog Number: SR-1006

Product Name: SRfluor® 680 azide

Product Description: A far-red emitting dye, belonging to the squaraine rotaxane family of dyes, which bears a free terminal azide group that can undergo click reactions with alkynes.

Figure 1: Spectra of SRfluor®-680 azide.

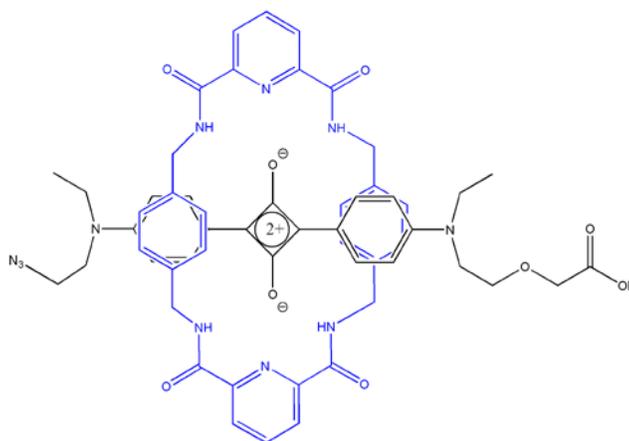
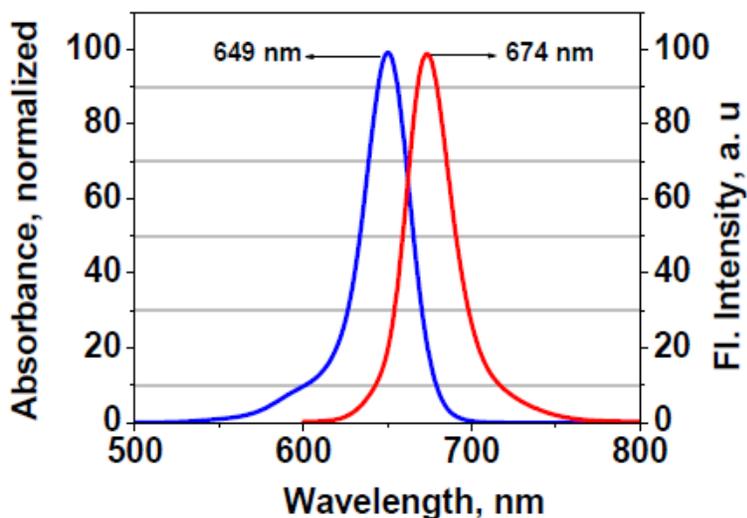


Figure 2: Spectra of SRfluor®-680 azide. (abs. max. = 649 nm; em. max. = 674 nm)



Product size: 1 mg of crystalline dark blue powder.

Molecular Weight: 1026.1

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Product Purity: > 90% by HPLC at 649nm

Extinction Coefficient (DMSO): ~200,900 cm⁻¹ M⁻¹ (649 nm).

Storage/Stability: Solid as well as stock solutions in DMSO should be stored in the dark at -10 to 0°C.

Applications:

SRfluor®- dyes has been found to be 5-20X brighter compared with cyanines, Alexa® and ATTO® dyes and also to have improved chemical and photochemical stability (1-3). It can be coupled to peptides, proteins and antibodies, etc., to provide fluorescent conjugates for use in Western-Blots and *in vivo* imaging studies.

Additional Information:

- 1mg of SRfluor®-680 azide can be dissolved in 0.97 mL of DMSO to provide a 1mM stock solution by gentle heating and sonication.
- SRfluor® 680 azide can be efficiently excited with either 633nm or 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.

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