

PSVue® 499-WS (mSEEK) Optical Probe

A visible fluorescent probe for detection of bacteria, apoptotic cells and other anionic membranes

Product Description: PSVue499-WS, also known as mSEEK, is a water soluble microbial targeted fluorescent imaging agent comprising a Zn-DPA unit and a BODIPY dye. This ready to use product contains 200uL of a 1mM solution of PSVue499-WS in water. The structure and spectral properties of PSVue499-WS are shown in Figs. 1 and 2 respectively. PSVue499-WS has been found to be non-phototoxic and enables detection of a wide variety of bacteria at concentrations in the range of 100-10,000 CFU/mL (e.g. E coli, S aureus, K pneumonia and B Thuringiensis [1-3]) via sensitive fluorescence microscopy or use of a CCD camera. PSVue499-WS is also expected to bind strongly to the phosphatidylserine (PS) residues exposed on the cell surface of apoptotic cells, through its zinc(II)-dipicolylamine (Zn-DPA) functionality, making it a useful apoptosis sensor. In addition to its utility in cell biology research, PSVue499-WS may be useful in the automation of biotechnology processes and high-throughput screening systems for drug candidates.

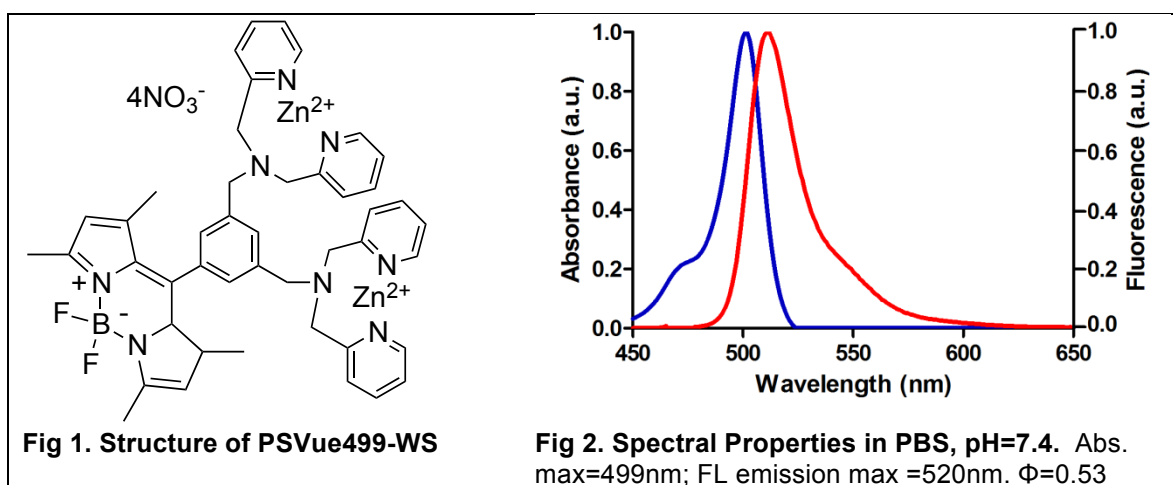


Fig 1. Structure of PSVue499-WS

Fig 2. Spectral Properties in PBS, pH=7.4. Abs. max=499nm; FL emission max =520nm. $\Phi=0.53$

Catalog #	Product Name	Size	Price (USD)
P-1009	PSVue499-WS (mSEEK)	200uL (1mM in H ₂ O)	\$314.00

Product Formulation: None required. Ready to use aqueous solution.

Storage and Handling: Store at 4°C in the refrigerator.

References:

- [1] Rice DR, Gan H, Smith BD (2015). Bacterial imaging and photodynamic inactivation using Zn(II)-dipicolylamine BODIPY conjugates. *Photochem. Photobio. Sci.*, **14**, 1271-1281
- [2] Rice DR, Clear KJ, Smith BD (2016). Imaging and therapeutic applications of zinc(II)-dipicolylamine molecular probes for anionic biomembranes. *Chem. Commun. (Camb.)*, July 7, **52** (57) 8787-8801.
- [3] Rice DR, Vacchina P, Norris-Mullins B, Morales MA, Smith BD (2016). Zinc (II)-dipicolylamine coordination complexes as targeting and chemotherapeutic agents for Leishmania major. *Antimicrobial Agents Chemotherapy*, **60**, 2932-2940.

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