

Product Information

ViaFluor™ 405 Live Cell Microtubule Stain

Catalog Number: 70064-T, 70064

Kit Contents

Component	70064-T	70064
ViaFluor™ 405 Live Cell Microtubule Stain, 1000X in DMSO	1 x 10 uL 70064-10uL	1 x 50 uL 70064-50 uL
Verapamil HCl, 100 mM in DMSO	1 x 20 uL 99836-20uL	1 x 100 uL 99836-100uL

Storage and Handling

Store at 4°C, protected from light. Product is stable for at least 12 months from date of receipt when stored as recommended. **Briefly centrifuge vials to collect contents at the bottom of the tubes before opening.**

Spectral Properties

Ex/Em: 408/452 nm

Product Description

ViaFluor™ 405 Live Cell Microtubule Stain is a blue fluorescent cell-permeable taxol probe for imaging the microtubule cytoskeleton in live cells. It is an easy-to-use, rapid, and sensitive stain.

Taxol binds to polymerized tubulin and stabilizes microtubules, resulting in inhibition of mitosis. However, fluorescent taxol compounds like ViaFluor™ 405 are less disruptive of microtubule dynamics and cell division, presumably due to lower binding affinity of the fluorescent probe compared to taxol itself. However, ViaFluor™ 405 may be cytotoxic with longer incubation times (up to 24 hours). If performing longer incubation times with the probe, the lowest concentration that gives acceptable signal should be used to minimize effects on the cells.

ViaFluor™ 405 Microtubule Stain is supplied with a vial of 100 mM verapamil, an efflux pump inhibitor that may improve probe retention and staining in certain cell types. The cytotoxicity of verapamil at different concentrations should be assessed if longer incubations will be performed.

Biotium also offers green fluorescent ViaFluor™ 488 Live Cell Microtubule Stain and far-red fluorescent ViaFluor™ 647 Live Cell Microtubule Stain (see related products). Visit www.biotium.com to view our selection of other live cell stains for mitochondria, lysosomes and cell nucleus.

Live Cell Staining Protocol

1. Prepare staining solution by diluting ViaFluor™ 405 Live Cell Microtubule Stain to a final concentration of 1X in complete cell culture medium. For example, add 1 uL of 1000X stain to 1 mL of medium.

Note: We recommend testing different probe concentrations to find the lowest concentration that gives good signal for your cell type and desired incubation time. Optimal concentration may range from 2X to 0.5X or lower.

Optional: Including verapamil in the staining solution may improve probe retention and staining. The optimal concentration may vary by cell type. We recommend testing concentrations between 10-100 uM.

2. Remove the cell culture medium and replace with medium containing probe. Incubate at 37°C for 30 minutes or longer. Staining intensity will increase over time.
3. Image cells in the DAPI channel.

Optional: You can remove the staining solution and replace with fresh medium before imaging if needed to reduce background. We recommend including verapamil in the fresh medium if you used it in the staining solution. Image cells as soon as possible after medium change. Staining may decrease over time after removing the staining solution, depending on the rate of probe efflux in different cell types.

Note: ViaFluor™ 405 Live Cell Microtubule Stain cannot be fixed after staining, and cannot be used to stain fixed cells or tissues.

Related Products

Catalog number	Product
70062	ViaFluor™ 488 Live Cell Microtubule Stain
70063	ViaFluor™ 647 Live Cell Microtubule Stain
70061	LysoView™ 540 Lysosome Stain
70058	LysoView™ 633 Lysosome Stain
70059	LysoView™ 650 Lysosome Stain
70052	MitoView™ Blue Mitochondrial Stain
70054	MitoView™ Green Mitochondrial Stain
70055	MitoView™ 633 Mitochondrial Stain
40083	NucSpot™ 470 Nuclear Stain for dead or fixed cells
40081	NucSpot™ Live 488 Nuclear Stain for live or fixed cells
40082	NucSpot™ Live 650 Nuclear Stain for live or fixed cells
40060	RedDot™1 Far-Red Nuclear Stain for live cells
40061	RedDot™2 Far-Red Nuclear Stain for dead or fixed cells
40046	Hoechst 33342, 10 mg/mL in water
70065	LipidSpot™ 488 Lipid Droplet Stain
30021-30024	CellBrite™ Cytoplasmic Membrane Stains

Please visit our website at www.biotium.com for information on our life science research products including fluorescent CF™ dye labeled lectins, toxins, Annexin V conjugates, NucView caspase substrates, and other probes and kits for live cell imaging and real-time apoptosis detection.

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