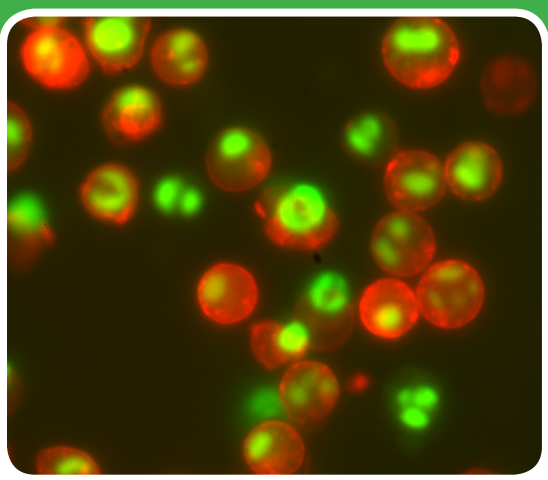


Live Cell Apoptosis Assays

NucView® fluorogenic caspase substrates for real-time apoptosis detection in live cells

NucView® caspase-3 substrates are novel fluorescent probes that allow real-time detection of caspase-3/7 activity in intact cells. They are non-toxic, allowing multi-day experiments to be performed. The assay is fast and easy, requiring no washing, and can be analyzed by microscopy or flow cytometry.

NucView® is made by attaching a fluorogenic DNA binding dye to the caspase-3/7 substrate peptide sequence DEVD. Once the substrate is cleaved by caspases in apoptotic cells, it releases the high-affinity DNA dye, which stains the cell nucleus with a bright and stable fluorescent signal (Figure 1). In contrast to other fluorogenic caspase substrates or fluorescent caspase inhibitor based (FLICA) assays, NucView® substrates can be used to detect caspase-3/7 activity in cells without inhibiting apoptosis progression.

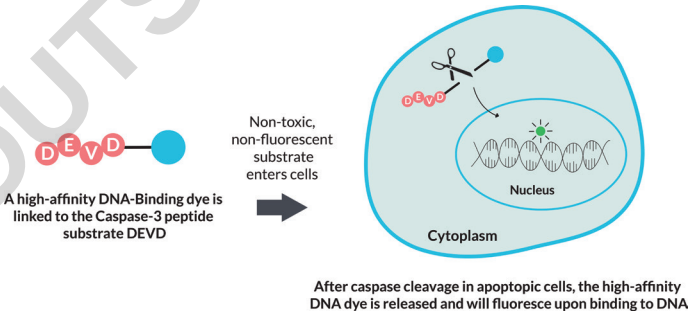
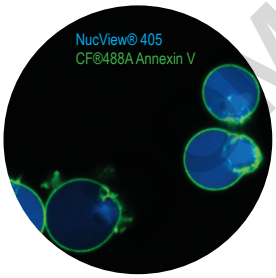


Figure 1. Schematic showing the principle of intracellular caspase-3/7 detection using NucView® caspase-3 substrates.

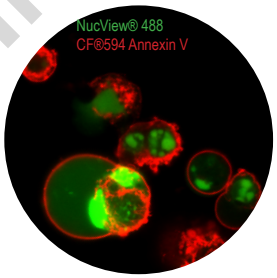
NucView® features

- Endpoint or real-time assays
- Rapid, no-wash assay
- Non-toxic, multi-day experiments possible
- Available in 3 colors
- For flow cytometry, microscopy or live cell imaging systems
- Dual detection of caspase activity and nuclear morphology
- Formaldehyde fixable

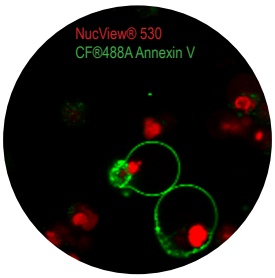
NucView® 405



NucView® 488



NucView® 530



Proven technology

NucView® caspase detection technology has been extensively tested. NucView® 488 substrate has been:

- Published in over **200 scientific papers**
- Validated in more than **70 different cultured cell lines**
- Validated in more than **30 different primary cell types**

NucView® Substrates

Cat. # 100 uL	Cat. # 10 uL	Product name
10402	10402-T	NucView® 488 Caspase-3 Substrate, 1 mM in DMSO
10403	10403-T	NucView® 488 Caspase-3 Substrate, 1 mM in PBS
10405	10405-T	NucView® 405 Caspase-3 Substrate, 1 mM in DMSO
10407	10407-T	NucView® 405 Caspase-3 Substrate, 1 mM in PBS
10406	10406-T	NucView® 530 Caspase-3 Substrate, 1 mM in DMSO
10408	10408-T	NucView® 530 Caspase-3 Substrate, 1 mM in PBS

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Biotium

NucView® combination staining kits

Biotium also offers kits containing the NucView® 488 Substrate together with other viability dyes for convenient multi-color experiments.

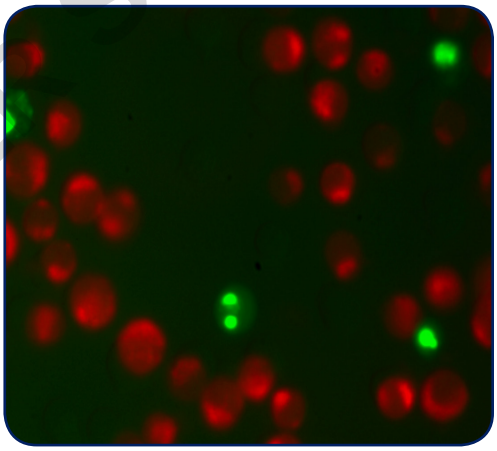
Dual-Apoptosis Kit:
NucView® 488 + Annexin V for co-detection of two apoptotic events, caspase cleavage and phosphatidylserine (PS) translocation at the plasma membrane.

Dual-Apoptosis Kit:
NucView® 488 + MitoView™ 633 for co-detection of two apoptotic events, caspase cleavage and loss of mitochondrial membrane potential.

Apoptosis/Necrosis Kit:
NucView® 488 + RedDot™2 for concurrent measurement of caspase cleavage (early apoptosis) and loss of membrane integrity (necrosis and late apoptosis).

NucView® Combination Assay Kits

Cat. #	Size	Product name
30067	50 assays	Dual Apoptosis Assay with NucView® 488 Caspase-3 Substrate and CF®594 Annexin V
30073	50 assays	Dual Apoptosis Assay with NucView® 488 Caspase-3 Substrate and CF®640R Annexin V
30030	50 assays	Dual Apoptosis Assay with NucView® 488 Caspase-3 Substrate and Texas Red® Annexin V
30062	100 assays	NucView® 488 and MitoView™ 633 Apoptosis Assay Kit
30072	100 assays	NucView® 488 and RedDot™2 Apoptosis and Necrosis Kit
30029	100 assays	NucView® 488 Caspase-3 Assay Kit for Live Cells (comes with an inhibitor)
30029-T	25 assays	NucView® 488 Caspase-3 Assay Kit for Live Cells (comes with an inhibitor)



Jurkat cells stained with the NucView® 488 and MitoView™ 633 Apoptosis Assay Kit. Cells with intact mitochondrial membrane potential stain red with MitoView™ 633, while apoptotic cells stain green with NucView® 488.

Other Apoptosis Reagents

Cat. #	Size	Product name
29003-29069	0.5 mL	Annexin V CF® Dye or biotin conjugates
29070	25 ug	Annexin V CF®680R conjugate
29006-29047	25 ug	Annexin V Near IR CF® Dye conjugates
29045; 29057	0.1 mL	Annexin V R-PE or APC conjugates
30060	100 assays	Apoptosis and Necrosis (CF®488A Annexin V and 7-AAD)
30061	100 assays	Apoptosis and Necrosis (CF®488A Annexin V and PI)
30065	50 assays	Apoptosis and Necrosis (CF®488A Annexin V and Ethidium Homodimer III)
30066	50 assays	Apoptosis, Necrosis and Healthy Cells (CF®488A Annexin V, Ethidium Homodimer III and Hoechst)
99902	15 mL	5X Annexin V Binding Buffer
10404-1	1 mg	Ac-DEVD-CHO Caspase-3 Inhibitor
00025	100 ug	Staurosporine
70055	20 x 50 ug	MitoView™ 633 (mitochondrial membrane potential-dependent)
30063, 30064, 30074	50 rxns	TUNEL Assay Apoptosis Detection Kit (CF®488A, CF®594 or CF®640R)

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TexasRed is a registered trademark of ThermoFisher Scientific.

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www.biotium.com
General Inquiries: order@biotium.com
Technical Support: techsupport@biotium.com
Phone: 800-304-5357

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