

NucView®

Caspase-3 substrates

Fluorescent caspase-3 detection in living cells

NucView® caspase-3 substrates are novel fluorescent probes that allow detection of caspase-3/7 activity in intact cells in real-time. 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.

NucView® is made by attaching a nucleic acid binding dye to the caspase-3/7 substrate peptide sequence DEVD. This uncleaved substrate dye is unable to bind to DNA and remains non-fluorescent. Once the substrate is cleaved by caspase-3/7 in apoptotic cells, it releases the high-affinity fluorescent DNA dye, which stains the cell nucleus with bright and stable fluorescence signal (Figure 1).

NucView® features

- Real-time monitoring of Caspase-3/7 activity
- Rapid, no-wash assay
- Available in 3 colors
- For flow cytometry, microscopy or microplate reader
- Formaldehyde fixable

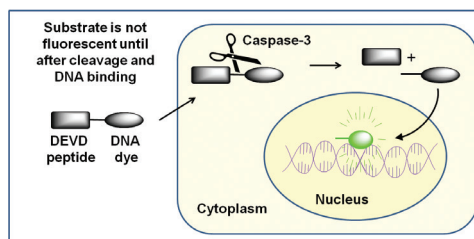
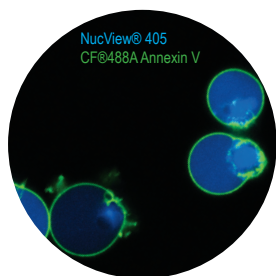


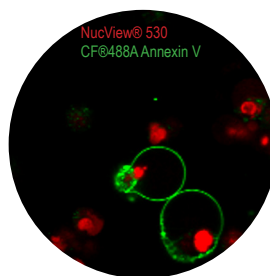
Figure 1. Schematic showing the principle of intracellular caspase-3/7 detection using NucView® caspase-3 substrates.

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

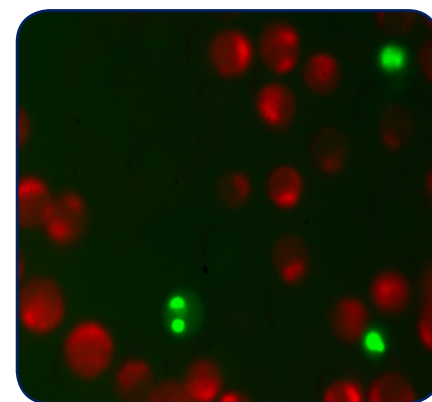
Cat. #, 100 uL	Cat. #, 10 uL	Product name
10402	10402-T	NucView® 488 Caspase-3 Substrate, 1 mM in DMSO
10403	10403-T	NucView® 488 Caspase-3 Substrate, 1 mM in PBS
10405	10405-T	NucView® 405 Caspase-3 Substrate, 1 mM in DMSO
10407	10407-T	NucView® 405 Caspase-3 Substrate, 1 mM in PBS
10406	10406-T	NucView®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

NucView® combination staining kits

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

NucView® Combination Assay Kits

Cat. #	Size	Product name
30067	50 assays	Dual Apoptosis Assay with NucView® 488 Caspase-3 Substrate and Annexin V-CF®594
30073	50 assays	Dual Apoptosis Assay with NucView® 488 Caspase-3 Substrate and Annexin V-CF®640R
30030	50 assays	Dual Apoptosis Assay with NucView® 488 Caspase-3 Substrate and Annexin V-TexasRed®
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.

Related Products and Accessories

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
99902	15 mL	5X Annexin V Binding Buffer
10404-1	1 mg	Ac-DEVD-CHO Caspase-3 Inhibitor
00025	100 ug	Staurosporine
30017	50 assays	Apoptosis and Necrosis Quantification Kit (Annexin V-Fitc and Ethidium Homodimer III)
30065	50 assays	Apoptosis and Necrosis Quantification Kit Plus (Annexin V-CF®488A and Ethidium Homodimer III)
30018	50 assays	Apoptotic, Necrotic and Healthy Cells Quantitation Kit Plus (Annexin V-Fitc, Ethidium Homodimer III and Hoechst)
30066	50 assays	Apoptotic, Necrotic and Healthy Cells Quantitation Kit Plus (Annexin V-CF®488A, Ethidium Homodimer III and Hoechst)
30060	100 assays	CF®488A Annexin V and 7-AAD Apoptosis kit (apoptosis and necrosis assay)
30061	100 assays	CF®488A Annexin V and PI Apoptosis kit (apoptosis and necrosis assay)
70054	20 x 50 ug	MitoView™ Green (not membrane potential-dependent)
70052	20 x 50 ug	MitoView™ Blue (membrane potential-dependent)
70055	20 x 50 ug	MitoView™ 633 (membrane potential-dependent)
30063-30074	50 rxns	Tunel Assay Apoptosis Detection Kit (CF®488A, CF®594 or CF®640R)
32002-32009	50 assays	Live-or-Dye™ Fixable Viability Staining Kits (8 color options)
32010-T	50 assays	Live-or-Dye™ NucFix Red Staining Kit
30002-T	150 assays	Viability/Cytotoxicity Assay Kit for Animal Live & Dead Cells (Calcein-AM and Ethidium Homodimer III)
30026	1000 assays	Calcein AM Cell Viability Assay Kit
30019	100 assays	MCB Glutathione Detection Kit
30006	1000 assays	MTT Cell Viability Assay Kit

- Dual-Apoptosis Kit: NucView® 488 + Annexin V labeled with red or far-red dyes for co-detection of two apoptosis events, caspase cleavage and phosphatidylserine (PS) translocation.
- 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 (apoptosis) and loss of membrane integrity (necrosis).

Visit www.biotium.com for information on our other life science research products, including fluorescent CF® dye labeled antibodies and antibody labeling kits, cellular stains, fluorescent ion indicators, PCR and molecular biology reagents, and much more.

NucView and its uses are protected by granted and/or pending US and international patents.

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