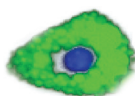


Advance your research using HCS tools from Invitrogen





With Invitrogen HCS-compatible products you can:

- Obtain quantitative results on multiple parameters, including cell health and toxicity
- Access industry-leading Molecular Probes® fluorescence-based assays and technologies
- Gather more data using high-content imaging workflows

High-content imaging and analysis offers the benefits of spatially resolved and multiparametric interrogation of cells in heterogeneous populations. These advantages are particularly evident in studies related to cellular stress and death. Fluorescent probes and assays that are robust and compatible with the workflow of high-content imaging are necessary to realize meaningful and quantitative data. Invitrogen offers a wide variety of solutions for determining cell health and toxicity in cell-based assays on automated imaging and high-throughput platforms. For additional information and pricing, please visit www.invitrogen.com/hcs.

Apoptosis

Many different approaches are utilized in the study of programmed cell death, or apoptosis. Cell death cascades are complex and dynamic, underscoring the importance of a multiparametric approach to assessment of apoptosis. Understanding the mechanisms of cell death and survival can represent a critical aspect of toxicological profiling and drug discovery. Invitrogen offers a variety of products developed for multiplex imaging-based detection of key apoptotic markers.

Cat. no.	Product	Emission color	Excitation	Emission	Stains live cells	Fixable	Stains fixed cells
C10245	Click-iT® TUNEL Alexa Fluor® 488 Imaging Assay, for microscopy and HCS, 50–100 assays	Blue	350	461			•
		Green	495	519			
C10246	Click-iT® TUNEL Alexa Fluor® 594 Imaging Assay, for microscopy and HCS, 50–100 assays	Blue	350	461			•
		Red	590	615			
C10247	Click-iT® TUNEL Alexa Fluor® 647 Imaging Assay, for microscopy and HCS, 50–100 assays	Blue	350	461			•
		Far red	650	670			
I35106	Image-iT® LIVE Green Caspase-3 and -7 Detection Kit, for microscopy, 25 tests	Blue	350	461	•	•	
		Green	488	530			
		Red	535	617			
I35102	Image-iT® LIVE Red Caspase-3 and -7 Detection Kit, for microscopy, 25 tests	Blue	350	461	•	•	
		Green	504	523			
		Red	550	595			
I35105	Image-iT® LIVE Green Caspase-8 Detection Kit, for microscopy, 25 tests	Blue	350	461	•	•	
		Green	488	530			
		Red	535	617			
I35104	Image-iT® LIVE Green Poly Caspases Detection Kit, for microscopy, 25 tests	Blue	350	461	•	•	
		Green	488	530			
		Red	535	617			
I35101	Image-iT® LIVE Red Poly Caspases Detection Kit, for microscopy, 25 tests	Blue	350	461	•	•	
		Green	504	523			
		Red	550	595			
S35115	SelectFX® Alexa Fluor® 488 Cytochrome c Apoptosis Detection Kit, for fixed cells	Green	495	519			•

Cell cycle

Disruptions in the cell cycle have traditionally been detected using BrdU assays. While effective, these assays are time-consuming and costly in terms of antibodies and reagents required. Our Click-iT® EdU system for cell cycle detection is simpler, faster, and more sensitive—and it's compatible with standard immunolabeling protocols. Cytotoxicity and the induction or progression of mitotic arrest can be measured with the antibody-based HCS Mitotic Index Kit.

Cat. no.	Product	Emission color	Excitation	Emission	Stains live cells	Fixable	Stains fixed cells
A10027	Click-iT® EdU Alexa Fluor® 488 High-Throughput Imaging (HCS) Assay, 2-plate size	Blue	350	461			•
		Green	495	519			
A10028	Click-iT® EdU Alexa Fluor® 488 High-Throughput Imaging (HCS) Assay, 10-plate size	Blue	350	461			•
		Green	495	519			
A10209	Click-iT® EdU Alexa Fluor® 594 High-Throughput Imaging (HCS) Assay, 2-plate size	Blue	350	461			•
		Red	590	615			
C10082	Click-iT® EdU Alexa Fluor® 594 High-Throughput Imaging (HCS) Assay, 10-plate size	Blue	350	461			•
		Red	590	615			
A10208	Click-iT® EdU Alexa Fluor® 647 High-Throughput Imaging (HCS) Assay, 2-plate size	Blue	350	461			•
		Far red	650	670			
C10081	Click-iT® EdU Alexa Fluor® 647 High-Throughput Imaging (HCS) Assay, 10-plate size	Blue	350	461			•
		Far red	650	670			
H10293	HCS Mitotic Index Kit, 2-plate size	Blue	358	461			•
		Green	495	519			
		Far red	638	686			

Cytotoxicity

The advantages of high-content imaging and analysis are particularly evident in studies related to cellular stress and death. The understanding of both pre-lethal and lethal aspects of mechanisms associated with cellular toxicity serves more comprehensive toxicological profiling and enables the generation of decision-making indices in the drug development process. Invitrogen offers a number of validated kits and reagents for robust multiplex interrogation of cell health and toxicity.

Cat. no.	Product	Emission color	Excitation	Emission	Stains live cells	Fixable	Stains fixed cells
H34157	HCS LipidTOX™ Phospholipidosis and Steatosis Detection Kit, for high-content screening, for cellular imaging, 2-plate size	Blue	350	461	•	•	•
		Green	495	505			
		Red	595	615			
H34158	HCS LipidTOX™ Phospholipidosis and Steatosis Detection Kit, for high-content screening, for cellular imaging, 10-plate size	Blue	350	461	•	•	•
		Green	495	505			
		Red	595	615			
H34350	HCS LipidTOX™ Green phospholipidosis detection reagent, 1,000X aqueous solution, for cellular imaging, 10-plate size	Green	495	525	•	•	
H34351	HCS LipidTOX™ Red phospholipidosis detection reagent, 1,000X aqueous solution, for cellular imaging, 10-plate size	Red	595	615	•	•	

Cellular processes

Phagocytosis, protein synthesis, and protein expression are examples of fundamental cellular processes, which can serve as useful markers for cell function and are readily detected using our optimized reagents.

Cat. no.	Product	Emission color	Excitation	Emission	Stains live cells	Fixable	Stains fixed cells
A10010	pHrodo™ <i>S. aureus</i> BioParticles® conjugate for phagocytosis	Red	560	585	•	•	
P35361	pHrodo™ <i>E. coli</i> BioParticles® conjugate for phagocytosis	Red	560	585	•	•	
P36600	pHrodo™, succinimidyl ester (SE)	Red	560	585	•	•	
C10289	Click-iT® AHA Alexa Fluor® 488 Protein Synthesis HCS Assay, 2-plate size	Blue	350	461			•
		Green	495	519			
T34561	TC-FIAsh™ II In-cell Tetracysteine Tag Detection Kit, green fluorescence, for live-cell imaging	Green	495	530	•	•	•
T34562	TC-ReAsH™ II In-cell Tetracysteine Tag Detection Kit, red fluorescence, for live-cell imaging	Red	550	595	•	•	•
T34563	TC-FIAsh™ TC-ReAsH™ II In-cell Tetracysteine Tag Detection Kit, with mammalian TC-Tag Gateway® expression vectors, green fluorescence, red fluorescence, for live-cell imaging	Green	495	530	•	•	•
		Red	550	595			

Structural markers

Invitrogen offers an extensive array of Molecular Probes® reagents for cellular structure and organelle staining. These probes can be used to study morphological changes in the cell or as referential markers in assays that depend on localization of targets within discrete subcellular locations. Choices are available in a wide range of colors for both live- and fixed-cell applications.

Cat. no.	Product	Emission color	Excitation	Emission	Stains live cells	Fixable	Stains fixed cells
A22281	Alexa Fluor® 350 phalloidin	Blue	346	442			•
A12379	Alexa Fluor® 488 phalloidin	Green	495	519			•
A34055	Alexa Fluor® 555 phalloidin	Orange	555	565			•
A12381	Alexa Fluor® 594 phalloidin	Red	590	617			•
A22287	Alexa Fluor® 647 phalloidin	Far red	650	668			•
B7474	Biotin-XX phalloidin	Nonfluorescent hapten					•
C10126	Cellular Lights™ Actin-GFP	Green	488	510	•	•	
C10127	Cellular Lights™ Actin-RFP	Red	555	584	•	•	
O36227	Organelle Lights™ Cyto-GFP	Green	488	510	•	•	
S34200	SelectFX® Alexa Fluor® 488 Endoplasmic Reticulum Labeling Kit, for fixed cells	Green	495	519			•
O36212	Organelle Lights™ ER-GFP	Green	488	510	•	•	
O36223	Organelle Lights™ ER-OFP	Orange	550	580	•	•	
O36230	Organelle Lights™ ER-RFP	Red	555	584	•	•	
O10104	Organelle Lights™ Endosomes-GFP	Green	488	510	•	•	
O36231	Organelle Lights™ Endosomes-RFP	Red	555	584	•	•	
O36215	Organelle Lights™ Golgi-GFP	Green	488	510	•	•	
O36224	Organelle Lights™ Golgi-OFP	Orange	548	565	•	•	
O10098	Organelle Lights™ Golgi-RFP	Red	555	584	•	•	
L7528	LysoTracker® Red DND-99, 1 mM solution in DMSO, special packaging	Red	577	590	•	•	

Cat. no.	Product	Emission color	Excitation	Emission	Stains live cells	Fixable	Stains fixed cells
O36228	Organelle Lights™ Lysosomes-GFP	Green	488	510	●	●	
O10100	Organelle Lights™ Lysosomes-RFP	Red	555	584	●	●	
O36216	Organelle Lights™ PM-CFP	Blue	440	480	●	●	
O36214	Organelle Lights™ PM-GFP	Green	488	510	●	●	
O36226	Organelle Lights™ PM-OFP	Orange	550	580	●	●	
O10139	Organelle Lights™ PM-RFP	Red	579	599	●	●	
O36210	Organelle Lights™ Mito-GFP	Green	488	510	●	●	
O36222	Organelle Lights™ Mito-OFP	Orange	548	565	●	●	
O36229	Organelle Lights™ Mito-RFP	Red	555	584	●	●	
M7510	MitoTracker® Orange CMTMRos	Orange	554	576	●	●	
M7512	MitoTracker® Red CMXRos	Red	579	599	●	●	
M22426	MitoTracker® Deep Red 633	Far red	640	665	●	●	
C10128	Cellular Lights™ Histone 2B-GFP	Green	488	510	●	●	
C10129	Cellular Lights™ Histone 2B-RFP	Red	555	584	●	●	
O36218	Organelle Lights™ Nuc-CFP	Blue	440	480	●	●	
O36209	Organelle Lights™ Nuc-GFP	Green	488	510	●	●	
O10099	Organelle Lights™ Nuc-RFP	Red	555	584	●	●	
O36213	Organelle Lights™ NE-GFP	Green	488	510	●	●	
S34201	SelectFX® Alexa Fluor® 488 Peroxisome Labeling Kit, for fixed cells	Green	495	519			●
O36211	Organelle Lights™ Peroxi-GFP	Green	488	510	●	●	
C10105	Cellular Lights™ MAP4-GFP	Green	488	510	●	●	
C10140	Cellular Lights™ MAP4-RFP	Red	555	584	●	●	
C10106	Cellular Lights™ Tubulin-GFP	Green	488	510	●	●	
C10112	Cellular Lights™ Tubulin-RFP	Red	555	584	●	●	
C10078	Cellular Lights™ CSF1r-GFP	Green	488	510	●	●	
C10079	Cellular Lights™ Exoc1-YFP	Yellow	514	528	●	●	
C10080	Organelle Lights™ Synaptophysin-GFP	Green	488	510	●	●	
C10323	Cellular Lights™ Talin-GFP	Green	488	510	●	●	
C10324	Cellular Lights™ Talin-RFP	Red	555	584	●	●	
C10130	Cellular Lights™ Null (Control)		Nonfluorescent control		●	●	



Understanding biology, enabling decisions.

Automated imaging and high-content analysis represent a new frontier in microscopy and cell biology. It is now possible to generate population-level data from the multiparametric analysis of each individual cell. The ability to derive statistically relevant data from many cells greatly increases our understanding and interpretation of the underlying biology. Such information is invaluable for analyzing on-target and off-target effects of potential drugs in real biological systems. With this knowledge in hand, informed decisions about a drug's potential utility and dosage levels can be made with greater confidence and insight.

For more than 30 years, **MOLECULAR PROBES®** has developed fluorescence technology that enables uniquely powerful labeling and detection solutions for cellular analysis. Molecular Probes® innovations have led to proprietary technologies that significantly advance assay sensitivity and specificity, opening research avenues that were previously impractical or impossible.



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