

Cell Health Assay kits

Viability, Cytotoxicity, Apoptosis & Senescence



ASPIRE
TO DISCOVER

Assay Genie: Maximum Support

About to Assay Genie

Assay Genie is a proprietary range of cell-based & biochemical assay kits developed by Reagent Genie, a life science reagents company with offices in London & Dublin and a global distribution network covering 32 countries.

Founded by Colm Ryan PhD and Sean Mac Fhearraigh PhD, Assay Genie provides premium quality assay kits along with excellent technical & logistics support so you can aspire to discover the future.



COLM RYAN PhD
CEO & co-founder of
Reagent Genie

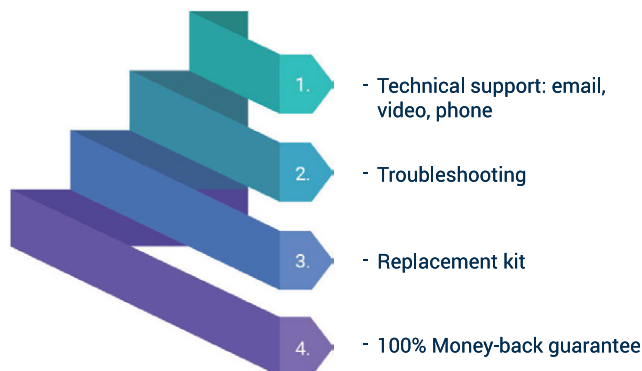


SEÁN MAC FHEARRAIGH PhD
CTO & co-founder of Reagent Genie

Maximum Support & Guarantee

Assay Genie strives to provide excellence in support to scientists all around the globe.

Assay Genie provides scientists with application-based support before, during and after testing or experiments are performed. On those rare occasions when problems arise, Assay Genie technical support scientists have a defined series of customer-centric steps to ensure that products perform to the maximum standards.



Rapid Global Delivery

Whether you are served by one of the trusted global distributors or are part of the direct logistics network, Assay Genie endeavours to ship products on-time, every time!

Contact Assay Genie 24/7 on info@reagentgenie.com with any technical, sales or logistics questions.



Cell Viability & Proliferation Assays

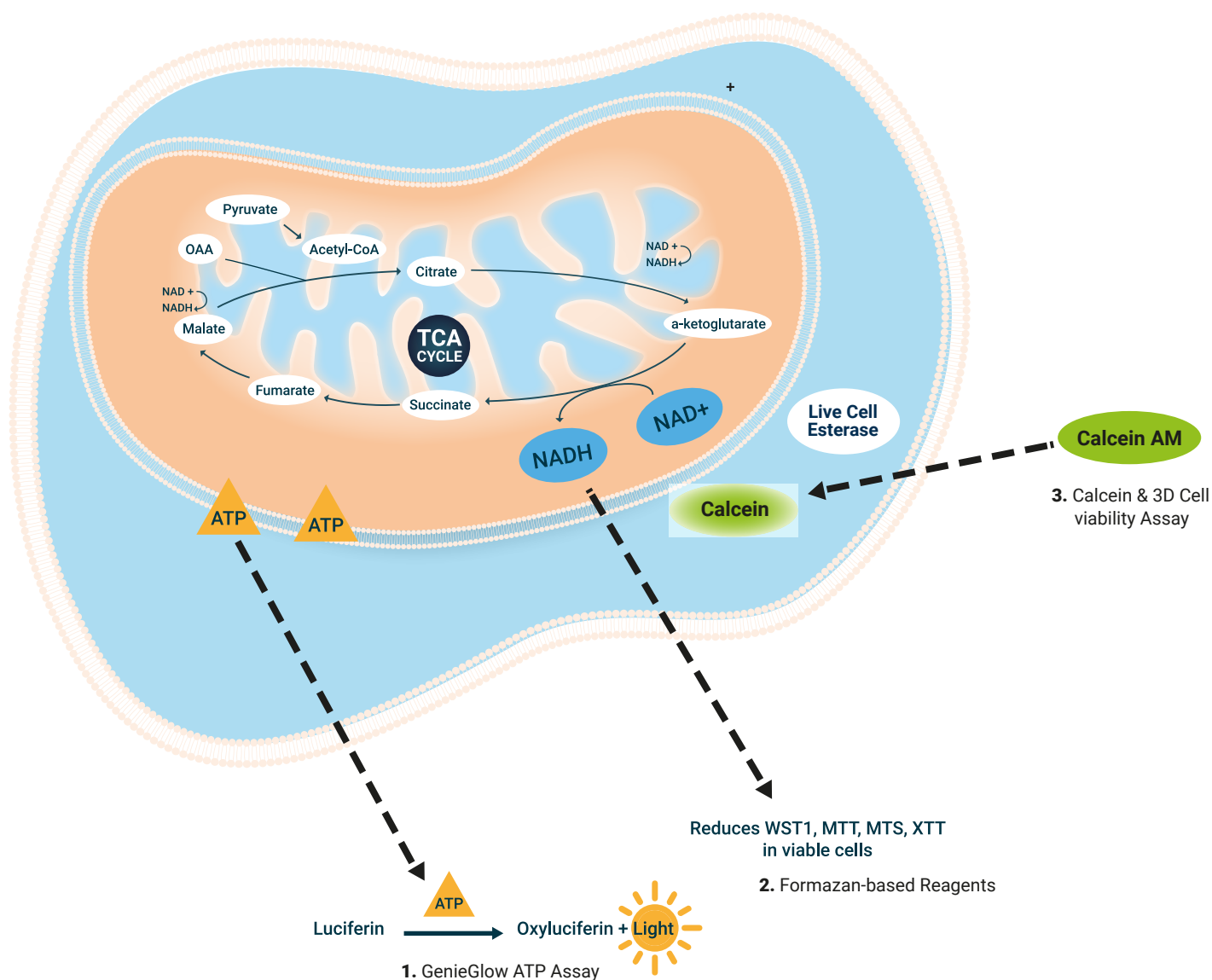
Assay Genie have created a suite of over 10 different assays for measuring cell viability and proliferation.

These assays enable the highly sensitive and reproducible detection of proliferation and viability in a wide variety of sample types.

Many assays display excellent Z'-factor values making them a super choice for high-throughput screening applications.

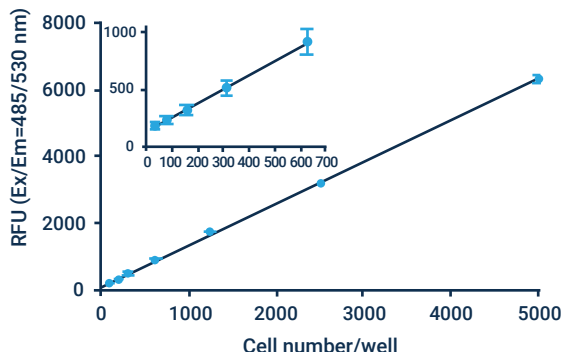
Key Features

- Highly Sensitivity: down to as little 10 cells/well on 96-well plates with lytic and non-lytic assays
- Rapid: get results in as little as 5 minutes for maximum detection
- Flexible: compatible with a wide range of sample types as well as 3D cultures with HTS 3D culture viability assay
- Homogenous: range of "no wash" assays for ease of use
- Automatable: most assays can be automated on high throughput robotic liquid handling systems in 96-well, 384-well and 1,536-well formats



Cell Viability & Proliferation Assays

Featured Assay : Calcein AM Cell Viability Assay



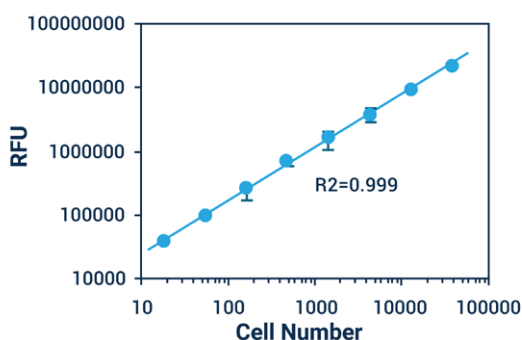
KEY FEATURES

High-throughput: Non-lytic and no-wash for HTS

Max Sensitivity: Detect as low as 50 viable cells in less than 30 min.

Figure: Fibroblast cells were grown & serially diluted in a clear cell culture plate and incubated with Calcein AM. Cells were lysed & fluorescence was measured. Inset graph is an expanded segment of the assay data at lower cell number per well.

Featured Assay : GenieBlue Cell Viability Assay



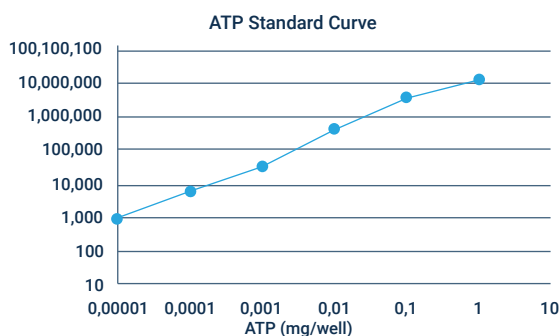
KEY FEATURES

High-throughput: Excellent HTS alternative to AlamarBlue™ & CellTiter-Blue™

Max Sensitivity: Detect as few as 100 cells in end-point or kinetic assay format

Figure: Linear relationship between GenieBlue fluorescence and cell number. HEK293 cells were serially diluted in a 384-well plate. Fluorescence intensity was linear to the cell number. The limit of detection was 100 cells.

Featured Assay: GenieGlow ATP Cell Viability Assay



KEY FEATURES

High-throughput: No-wash homogenous assay

Highly-sensitive: Detect as few as 10 cells per well

Rapid: 10 sec/sample or 30 minutes in total

Figure: A) ATP Standard Curve using our Diaphanes Pectinealis (rLucHS) luciferase

Cell Viability & Proliferation Assays

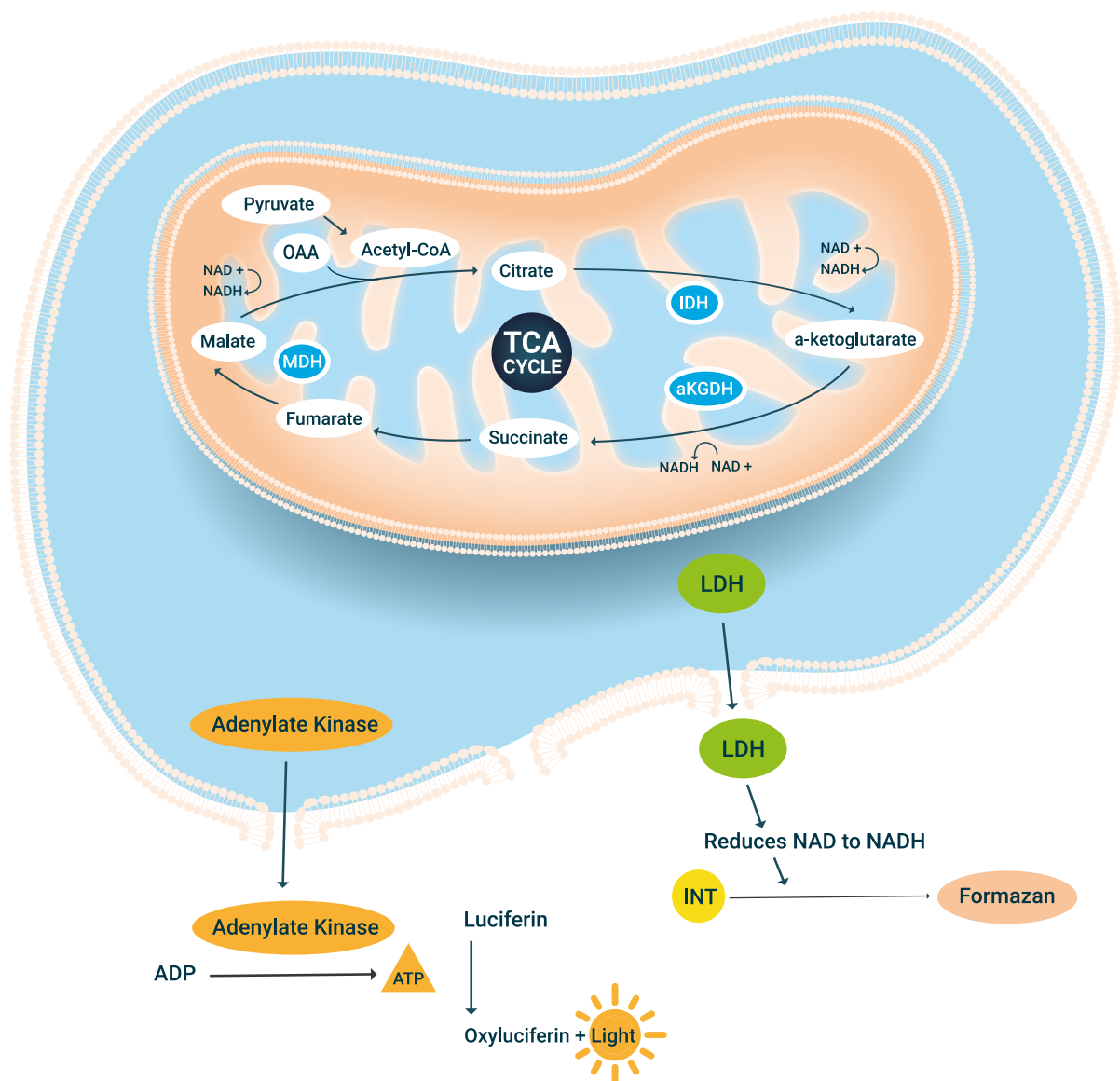
ASSAY	PARAMETER	TIME	THROUGHPUT	SENSITIVITY	MEASUREMENT	SIZE	CAT NO.
GenieGlow ATP Cell Viability Assay Kit	Quantify ATP from viable cells	5 minutes	96 384	~10 cells	Plate Reader Luminescence	200 assays 1000 assays	BN00520 BN00521
GenieBlue Cell Viability Assay Kit	NADH reduction of Resazurin (Kinetic)	1 - 24 hours	96 384 1536	100 cells	Plate Reader Absorbance: 565nm Fluorescence: Ex. 530nm / Em. 590nm	2,500 assays 10000 assays	CV0007 CV0008
Calcein AM Cell Viability Assay Kit	Calcein (live cell esterase)	30 minutes	96 384 1536	50 cells	Plate Reader Fluorescence: Ex. 485nm / Em. 530nm	1000 assays	BN00563
3D HTS Cell Viability Assay Kit	Calcein (live cell protease) optimised for 3D cultures	30 minutes	96 384 1536	50 cells	Plate Reader Fluorescence: Ex. 485nm / Em. 530nm"	100 assays	BN01109
MTS Cell Proliferation Assay Kit	Reduction of MTS to Formazan (1-Step)	0.5 - 4 hours	96 384	200 - 1000 cells	Plate Reader Absorbance: 490nm	250 assays 500 assays 2500 assays 5000 assays 10000 assays	BN00551 BN00552 BN00553 BN00554 BN00555
MTT Cell Proliferation Assay Kit	Reduction of MTT to Formazan	3 hours	96 384	200 - 1000 cells	Plate Reader Absorbance: 590nm	1000 assays	BN00550
XTT Cell Proliferation Assay Kit	Reduction of XTT by NADPH (1-Step)	2 - 4 hours	96 384 1536	200 - 1000 cells	Plate Reader Absorbance: 450nm	500 assays	CV0005 CV0006
1-Step Cell Proliferation Assay Kit Lite	Reduction of WST-1 to formazan	0.5 - 4 hours	96 384 1536	200 - 1000 cells	Plate Reader Absorbance: 450nm	500 assays 2500 assays	BN00556 BN00557
Live/Dead Cell Viability Assay Kit	Live cell protease / Dead cell DNA dye	20 minutes	96	50 - 100 cells	FACS & FL Microscopy Live: Ex. 488nm / Em. 530nm Dead: Ex. 495nm / Em. 635nm	100 Stainings	BN00732
BrdU Cell Proliferation Assay Kit	BrdU	1 - 5 hours	96 384	50 - 100 cells	Plate Reader Absorbance: 450nm	200 assays 1000 assays	BN00564 BN00565
Global RNA Synthesis kit (Click Kit)	Click chemistry kit Modified RNA detected via azide containing dye	5 hours	96	N/A	FACS & FL Microscopy Ex. 480nm / Em. 530/590nm	100 assays	BN00938
Global Protein Synthesis kit (Click Kit)	Click chemistry kit Alkyne analog (OP-puro)	3 - 5 hours	96	N/A	FACS & FL Microscopy Ex. 488nm / Em. 440/590nm	100 assays	BN00697

Cytotoxicity Assays

Assay Genie have developed over 10 assays to quantify cellular cytotoxicity and senescence. Utilising best-in-class technology, many of the Assay Genie Cytotoxicity assays come in 1-step, no wash, homogenous formats enabling automation for high throughput screening applications. All our assays enable highly sensitive and reproducible detection of cytotoxicity and senescence in a variety of sample types.

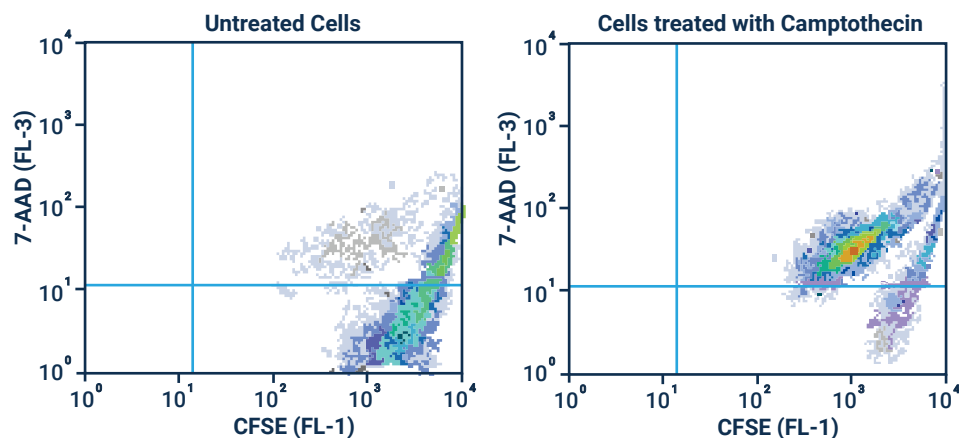
Key Features

- Simple Detection: absorbance, fluorescence and luminescence lytic and non-lytic assays
- Rapid: results in as little as 20 minutes for maximum detection
- Flexible: compatible with a wide range of sample types
- 1-Step: range of "no wash" 1-step assays for ease of use
- Automatable: most assays can be automated on high throughput robotic liquid handling systems in 96-well, 384-well and 1,536-well formats



Cytotoxicity Assays

Featured Assay: ADCC Assay



KEY FEATURES

High-throughput: Non-lytic ADCC (Antibody Dependent Cell Cytotoxicity) (ADCC)

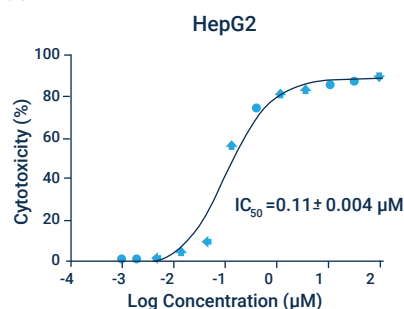
Rapid: Directly assay for ADCC in as little as 30 minutes

Easy: Maximise data on most flow cytometers

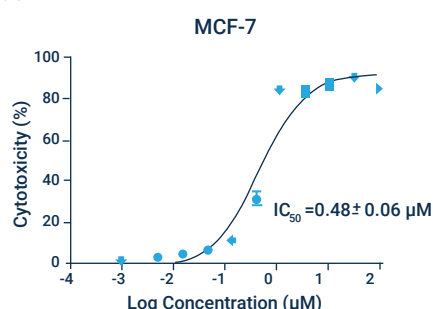
Figure: Jurkat cells (10^5 cells/ml) were grown in RPMI media supplemented with 10% FBS. Cells were treated with camptothecin ($5 \mu\text{M}$) overnight & stained with CFSE and 7-AAD for 30 min. at 37°C . The graph (right side) displays the cytotoxic effect of the compound, illustrating apoptosis using CFSE and 7-AAD.

Featured Assay: Sulforhodamine B (SRB) Cell Cytotoxicity Assay Kit

(a)



(b)



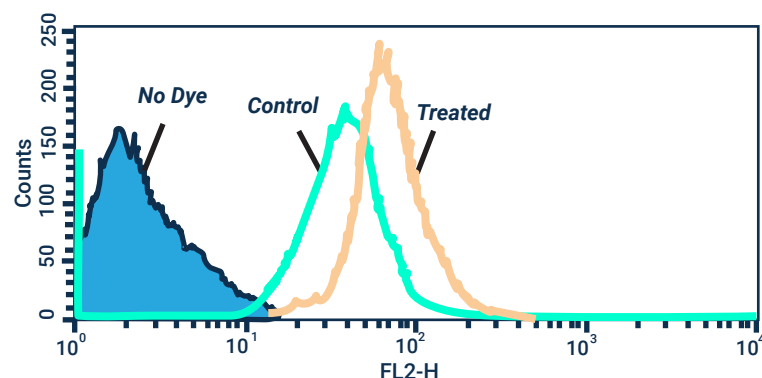
KEY FEATURES

Easy-to-Use: Simple non-radioactive protocol with results in less than 2 hours

Max Sensitivity: Detect between 5,000 & 50,000 cells per well

Figure: Dose-response curve of (a) HepG2 & (b) MCF-7 cells after exposing to doxorubicin for 72 hr determined by the SRB assay. Assays were performed according to the kit protocol in triplicate.

Featured Assay: Senescence Assay



KEY FEATURES

High-throughput: Simple, 1-step protocol ideal for HTS

Max Sensitivity: Detect senescence in as little as 2 hour assay time.

Figure: 3T3 cells were treated (with and without 200nM of Daunorubicin.HCl; test and control response respectively). Cells were incubated with media containing Senescence Dye then washed and analysed by flow cytometry.

Cytotoxicity Assays

ASSAY	PARAMETER	TIME	THROUGHPUT	INSTRUMENT	MEASUREMENT	SIZE	CAT NO.
ADCC Assay kit	CFSE (Live cells) and 7-ADD (Dead cells)	30 minutes	96 384	FACS	Live Cells: FL-1 Channel Dead Cells: FL-3 Channel	100 assays	BN00582
GenieGlow Cytotoxicity Assay Kit	Adenylate Kinase (AK) Release (1-Step)	30 minutes	96 384 1535	Plate Reader	Luminescence	500 assays	BN00579
SRB Assay	SRB-Protein complex formation (non-metabolic)	2.5 hours	96 384	Plate Reader	Absorbance: 565nm	1,000 assays	CV0009
LDH Cytotoxicity Assay Kit	LDH Release	55 minutes	96 384	Plate Reader	Absorbance: 490nm	400 assays 2,000 assays	CV0020 CV0021
Autophagy/ Cytotoxicity Assay kit	Autophagosome dye / Dead cell dye	30 minutes	96	FACS	Autophagy: UV Channel Cell Death: FL-2 Channel	50 assays	BN00691
Senescence Detection kit	SA- β -Gal activity	1 - 2 hours	96	FACS	LFL-1 to FL-1	500 assays	BN01149
XTT Cell Proliferation Assay Kit	Reduction of XTT by NADPH(1-Step)	2 - 4 hours	96 384 1536	Plate Reader	Plate Reader Absorbance: 450nm	500 assays	CV0005 CV0006
1-Step Cell Proliferation Assay Kit Lite	Reduction of WST-1 to formazan	0.5 - 4 hours	96 384 1536	Plate Reader	Plate Reader Absorbance: 450nm	500 assays 2500 assays	BN00556 BN00557
Live/Dead Cell Viability Assay Kit	Live cell protease / Dead cell DNA dye	20 minutes	96	Microscope/ FACS	Live: Ex. 488nm / Em. 530nm Dead: Ex. 495nm / Em. 635nm	100 Stainings	BN00732
BrdU Cell Proliferation Assay Kit	BrdU	1 - 5 hours	96 384	Plate Reader	Plate Reader Absorbance: 450nm	200 assays 1000 assays	BN00564 BN00565

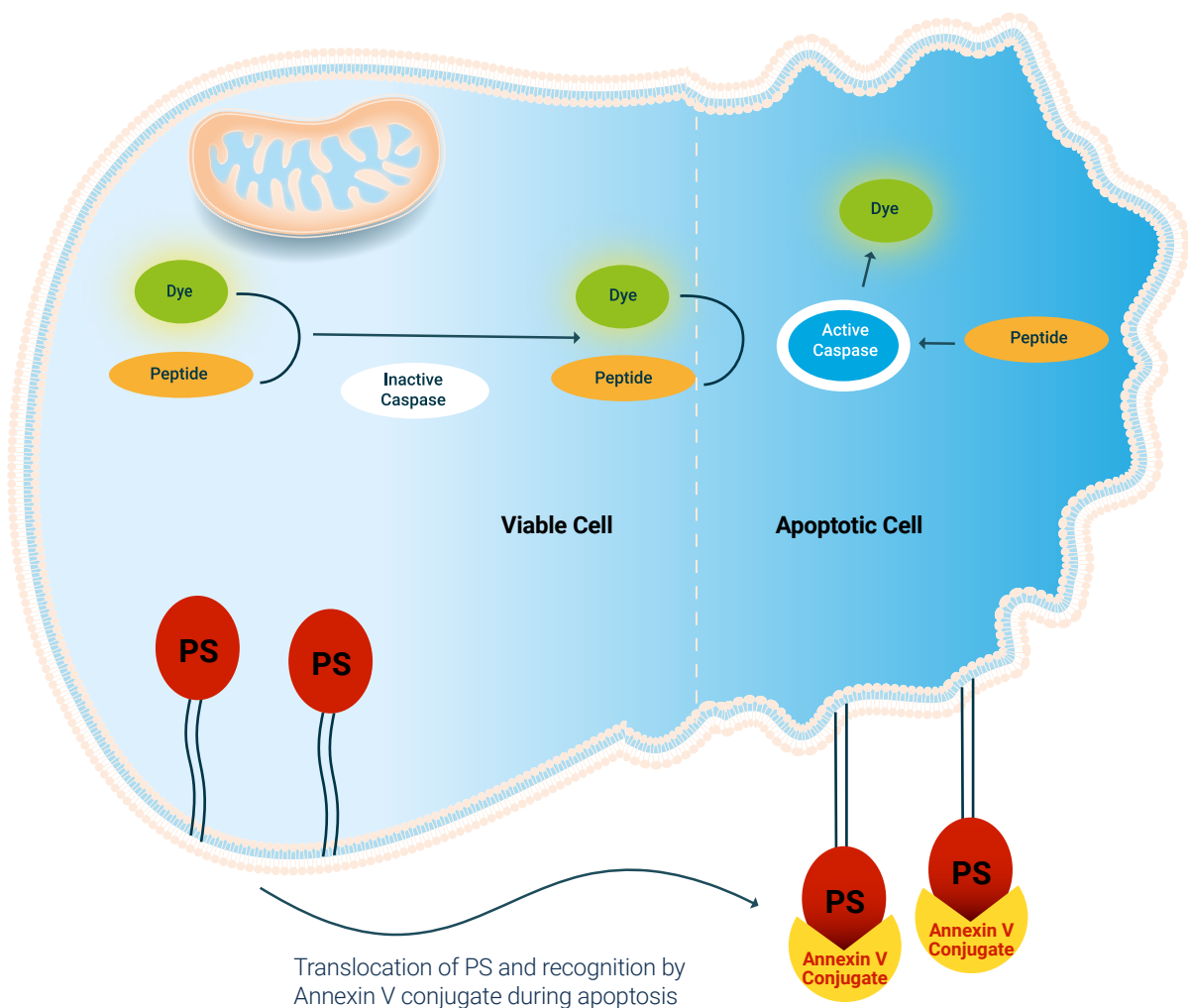
Apoptosis Assays

Assay Genie have developed an extensive suite of assays to measure various forms of cell death including the highly sensitive and reproducible detection of apoptosis & necrosis. These assays detect key biomarkers such as caspase activity, DNA fragmentation and translocation of phosphatidylserine (PS) to the outer surface of the plasma membrane.

Utilising best-in-class technology, many of the Assay Genie assays allow for the in-situ or in vitro analysis of apoptosis using commonly available platforms equipped with absorbance or fluorescence detection modules.

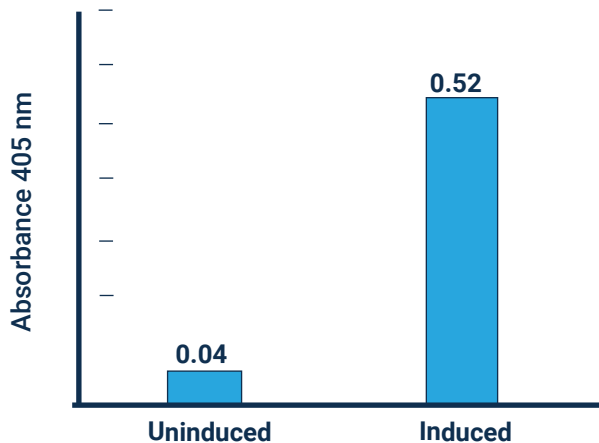
Key Features

- Simple Detection: use with plate readers, flow cytometers or fluorescent microscopes
- Flexible: array of caspase activity assays compatible with fluorescence or absorbance read-outs
- Rapid: results in as little as 10 minutes for maximum detection
- Flexible: use with a wide range of sample types



Apoptosis & Necrosis Assays

Featured Assay: Caspase 3/7 Activity Assay



KEY FEATURES

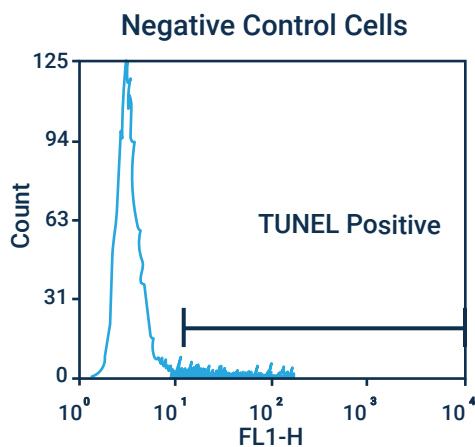
Relevant: Quantify Caspase activity in various sample types

Flexible: Choose from either colorimetric & fluorescence Caspase activity assays

Screening: Use our unique Caspase Inhibitor Screening kits to screen for inhibitors of Caspase activity

Figure: Induction of Caspase-3 Activity by Anti-Fas Antibody in Jurkat-T Cells using Caspase-3 Colorimetric Assay Kit (BN00017-18)

Featured Assay: TUNEL Assay Kit (Direct In Situ)

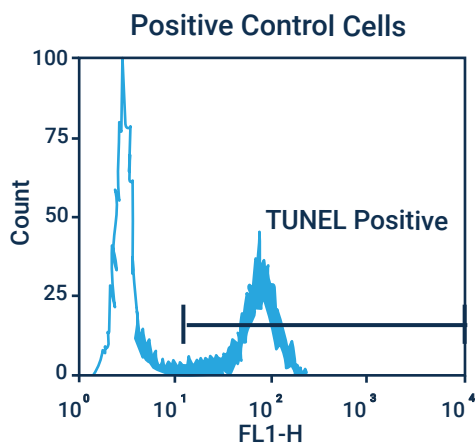


KEY FEATURES

Relevant: Measure apoptosis via DNA fragmentation

Fast: Complete protocol in ~3 hours

Figure: The TUNEL Assay kit (Direct In Situ) DNA Fragmentation Assay Kit provides complete components including control cells for detecting DNA fragmentation by fluorescence microscopy or flow cytometry



Apoptosis & Necrosis Assays

ASSAY	PARAMETER	TIME	THROUGHPUT	INSTRUMENT	MEASUREMENT	SIZE	CAT NO.
Caspase 1 Assay Kit	Caspase 1 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 405nm	25 assays 100 assays	BN00028 BN00029
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00024 BN00025
Caspase 2 Assay Kit	Caspase 2 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 405nm	25 assays 100 assays	BN00052 BN00053
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00048 BN00049
Caspase 3/7 Assay Kit	Caspase 3/7 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 400nm	25 assays 100 assays	BN00017 BN00018
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00013 BN00014
Caspase 4 Assay Kit	Caspase 4 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 400nm	25 assays 100 assays	BN00135 BN00136
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00131 BN00132
Caspase 5 Assay Kit	Caspase 5 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 400nm	25 assays 100 assays	BN00084 BN00085
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00075 BN00076
Caspase 6 Assay Kit	Caspase 6 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 400nm	25 assays 100 assays	BN00044 BN00045
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00040 BN00041
Caspase 8 Assay Kit	Caspase 8 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 400nm	25 assays 100 assays	BN00036 BN00037
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00032 BN00033
Caspase 9 Assay Kit	Caspase 9 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 400nm	25 assays 100 assays	BN00060 BN00061
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00056 BN00057
Caspase 10 Assay Kit	Caspase 10 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Absorbance: 400nm	25 assays 100 assays	BN00123 BN00124
					Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00103 BN00104
Caspase 12 Assay Kit	Caspase 12 Activity Cell Culture & Tissue Samples	1 -2 hours	96 384	Plate reader	Fluorescence: Ex. 400nm / Em. 505nm	25 assays 100 assays	BN00339 BN00340
Annexin V-FITC Apoptosis Detection Kit	Annexin V-FITC binding to Phosphatidylserine (PS)	15 minutes	96	FACS FL Microscopy	Ex. 488nm/ Em. 530nm	100 assays	CV0001
Annexin V-APC Apoptosis Detection Kit	Phosphatidylserine (PS) Detection	15 minutes	96	FACS FL Microscopy	Ex. 633nm/ Em. 700nm	100 assays	CV0002

Apoptosis & Necrosis Assays

ASSAY	PARAMETER	TIME	THROUGHPUT	INSTRUMENT	MEASUREMENT	SIZE	CAT NO.
Annexin V-Biotin Apoptosis Detection Kit	Phosphatidylserine (PS) Detection	15 minutes	96	N/A	N/A	100 assays	CV0003
Annexin V-PE Apoptosis Detection Kit	Phosphatidylserine (PS) Detection	15 minutes	96	FACS FL Microscopy	Ex. 488 nm/ Em. 578nm	100 assays	CV0004
Annexin V-CY3 Apoptosis Detection Kit	Phosphatidylserine (PS) Detection	10 minutes	96	FACS FL Microscopy	Ex. 543 nm/ Em. 570nm	25 assays 100 assays	BN00004 BN00005
Annexin V-CY5 Apoptosis Detection Kit	Phosphatidylserine (PS) Detection	10 minutes	96	FACS FL Microscopy	Ex. 649 nm/ Em. 670nm	25 assays 100 assays	BN00007 BN00008
Annexin V-GFP Apoptosis Detection Kit	Phosphatidylserine (PS) Detection	10 minutes	96	FACS FL Microscopy	Ex. 488 nm/ Em. 530nm	25 assays 100 assays	BN00010 BN00011
Annexin V-PE/CY5 Apoptosis Detection Kit	Live Cell Phosphatidylserine (PS) Detection	10 minutes	96	FACS FL Microscopy	Ex. 488 nm/ Em. 670nm	25 assays 100 assays	BN00139 BN00140
Apoptosis / Necrosis Assay (FITC) kit	1-Step Live Cells Apoptosis: Annexin V-FITC Necrosis: SYTOX Green	10 minutes	96	FACS FL Microscopy	SYTOX Green & Annexin V-FITC: Ex. 488nm / Em. 530nm FL1	25 assays 100 assays	BN00473 BN00474
Apoptosis / Necrosis Assay (CY3) kit	1-Step Live Cells Apoptosis: Annexin V-CY3 Necrosis: SYTOX Green	10 minutes	96	FACS FL Microscopy	SYTOX Green: Ex.488nm/Em. 530nm FL1 Annexin V-CY3: Ex.543nm/Em.570nm FL2	25 assays 100 assays	BN00476 BN00477
Apoptosis / Necrosis Assay (PE) kit	1-Step Live Cells Apoptosis: Annexin V-PE Necrosis: SYTOX Green	10 minutes	96	FACS FL Microscopy	SYTOX Green: Ex.488nm/Em.530nm FL1 Annexin V-PE: Ex.488nm/Em.578nm FL2	25 assays 100 assays	BN00479 BN00480
TUNEL Assay Kit (BrdU DNA)	DNA fragmentation via Br-dUTP/anti-BrdU FITC Ab	1 - 3 hours	96	FACS FL Microscopy	FITC: Ex.488 nm/Em.520nm PI: Ex. 488 nm/Em.623nm	60 assays	BN00654
TUNEL Assay Kit (Direct In Situ)	DNA fragmentation via fluorescein-12-dUTP	1 - 3 hours	96	FACS FL Microscopy	FITC: Ex.488 nm/Em.520nm PI: Ex. 488 nm/Em.623nm	50 assays	BN00655
TUNEL Assay Kit (BrdU-IHC DNA)	DNA fragmentation via Br-dUTP/anti-BrdU Biotin Ab	1 - 3 hours	96	Microscopy	IHC	50 assays	BN00656
TUNEL Assay Kit (BrdU-RED DNA)	DNA fragmentation via Br-dUTP/anti-BrdU RED Ab	1 - 3 hours	96	FACS FL Microscopy	BrdU: Ex.488 nm/Em.576nm 7-AAD: Ex.488 nm/Em.655nm	60 assays	BN00657