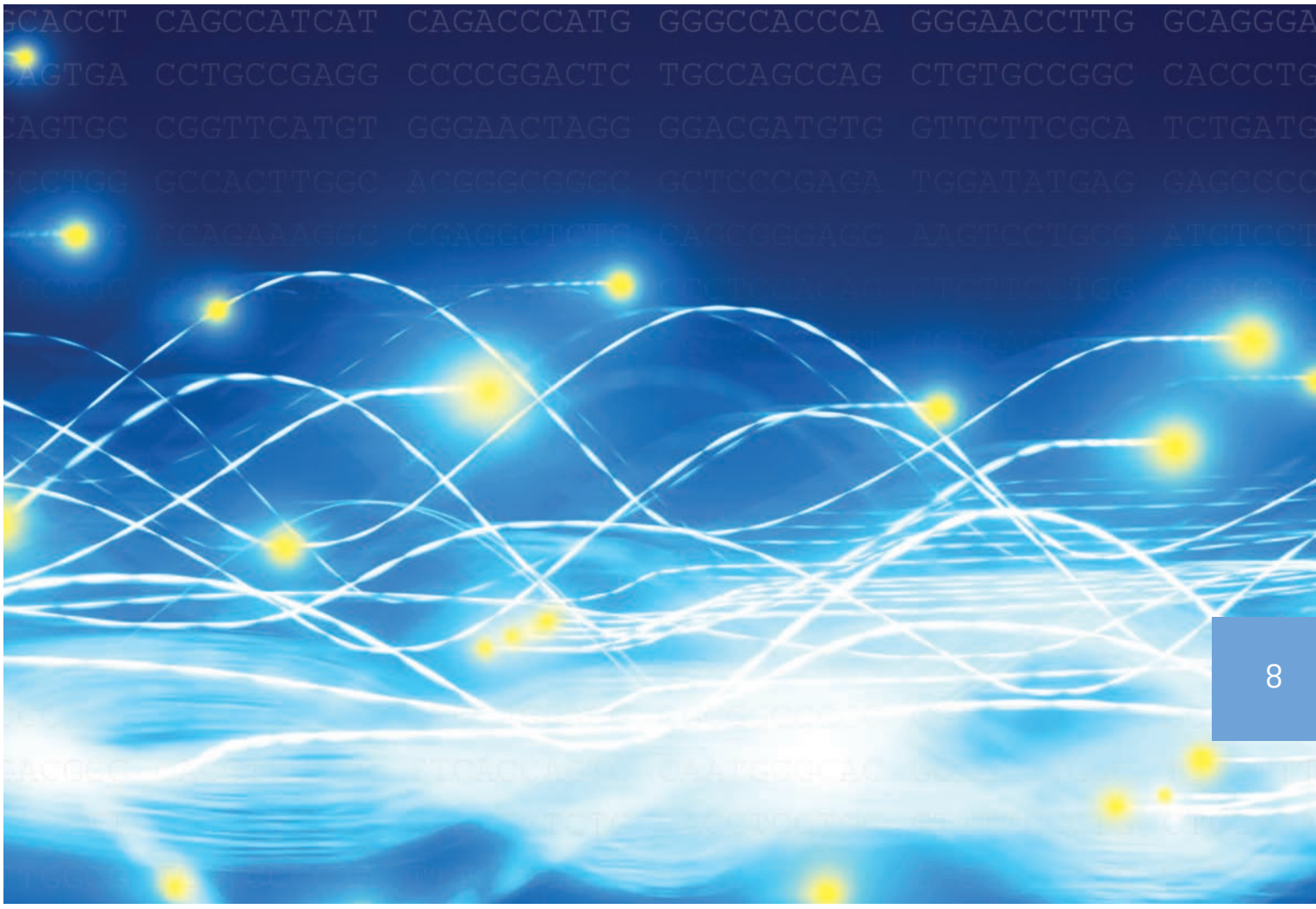
8 BioAssay Products and Services



BioAssay Products and Services

Bioluminescent Cell Health

Cell Function

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Bioluminescent Cell Health

Bioluminescent Cell Health

Introduction

Achieve outstanding sensitivity when evaluating cell proliferation and cell death with our easy-to-use bioluminescent cell health assays. These assays are suitable for use with adherent or suspension cultures of cell lines and primary cells.

ViaLight™ Cell Proliferation and Cytotoxicity BioAssay Kits are designed to provide unprecedented speed and sensitivity for cytotoxicity and cell proliferation studies, and are safer than traditional radioactive methods.

The ToxiLight™ Non-destructive Cytotoxicity BioAssay Kit is a bioluminescent, non-destructive cytolysis assay kit designed to measure the release of the enzyme adenylate kinase (AK) from damaged cells.

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ViaLight™ Cell Proliferation and Cytotoxicity BioAssay Kit

ViaLight™ Plus Cell Proliferation and Cytotoxicity BioAssay Kits provide unprecedented speed and sensitivity for cytotoxicity and cell proliferation studies. These kits are ideal for suspension and, adherent, and 3D cell cultures. The assays are safer than traditional radioactive methods. ViaLight™ protocols are as fast and easy as other viability kits. The ViaLight™ Kit incorporates bioluminescent detection of cellular ATP as a measure of viability. It delivers high, stable luminescent signals for an extended period of time, providing greater experimental design flexibility. The easy, two-step, assays are scalable for high-throughput applications in both 96- and 384-well formats on a variety of luminometers or scintillation counters are used to detect ionizing radiation.

The ViaLight™ MDA Plus Microbial Proliferation and Cytotoxicity Kit has been optimized for use with bacteria or yeast. The basic reaction remains the same as the ViaLight™ Plus Kit, however, the lysis reagent has been optimized for bacteria and yeast. Sensitivity is 1,000 bacterial cells or 100 yeast cells per well.

Benefits

- **Fast** – Results from a 96-well plates can be processed and analyzed in <15 minutes
- **Sensitive** – Detect as few as ten cells allowing for lower seeding densities and more assays
- **Convenient** – Simply add two reagents directly to your culture well and read
- **Robust** – Dynamic range of five decades with both adherent or suspension cultures

Applications

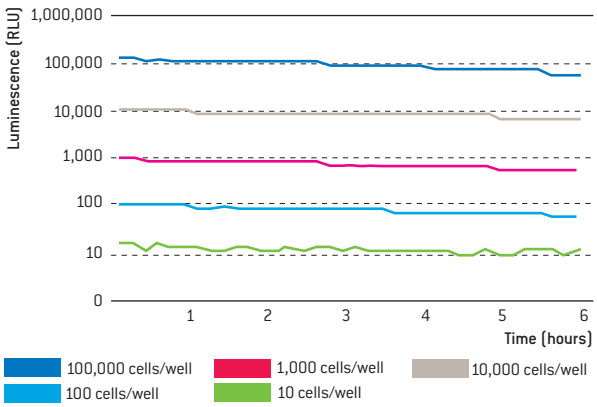
- Cell proliferation studies
- Cytotoxicity studies
- Cell viability studies
- High-throughput screening

Specifications	
Detection limit:	ViaLight™ Plus – ten mammalian cells; ViaLight™ MDA – 1,000 bacteria per well
Assay time:	1 second integrated reading per sample <15 minutes per 96-well plate
Linear range:	Greater than five orders of magnitude
Reproducibility:	Typical coefficient of variation (CV) ≈6%
Correlation:	Excellent with tritiated thymidine (typically, R^2=0.995, p<0.01)
Suitable cell types:	Mammalian cells (adherent and non-adherent); bacterial and yeast cells

2°C to 8°C, do not freeze prior to reconstitution

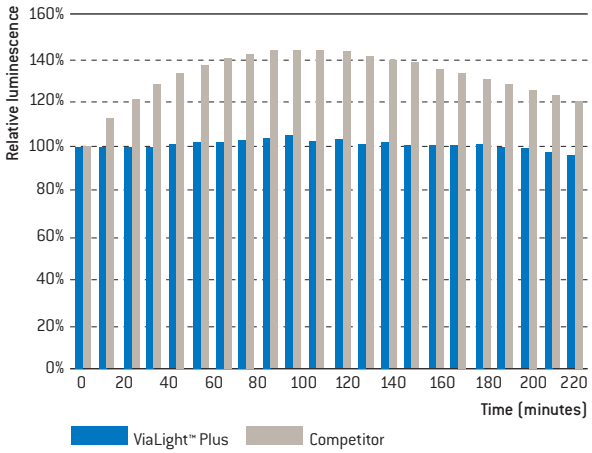
www.lonza.com/vialight

ViaLight™ Plus BioAssay Kit Signal Stability



Extended luminescent signal stability (half life >6 hours) regardless of the number of cells used facilitates batch processing and ensures consistent results.

Comparison of Signal Stability Over Time



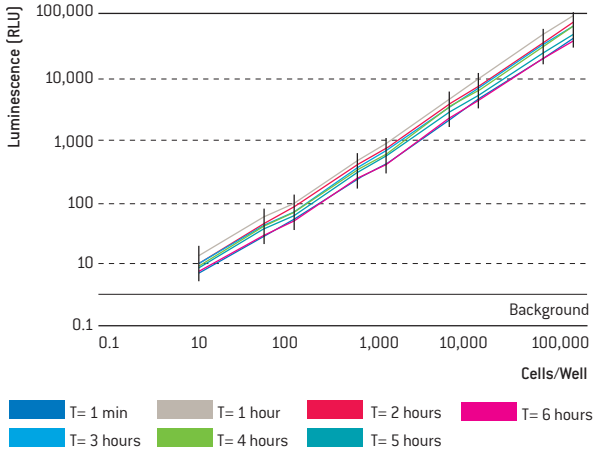
Light output with ViaLight™ Plus BioAssay Kit and a competitive luminescent assay kit with A549 cells was compared over time. The consistent light output, 10-fold lower background and exceptional lysis capabilities of the ViaLight™ BioAssay Kit ensure superior results.

Ordering information on the next page.

ViaLight™ Cell Proliferation and Cytotoxicity BioAssay Kits

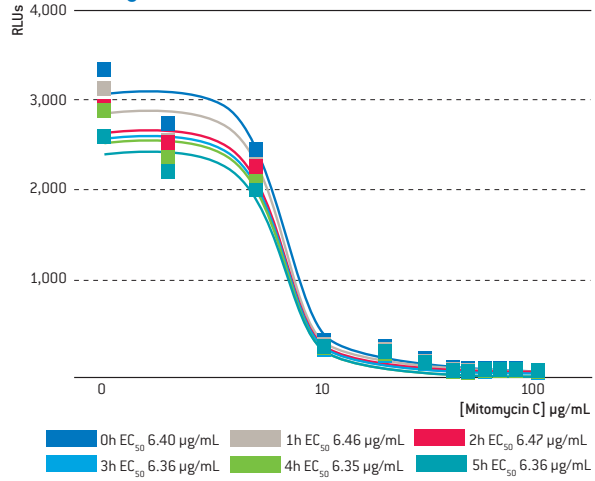
Continued

ViaLight™ Plus BioAssay Kit Sensitivity and Extended Linearity



Light output at various times after reagent addition and with increasing numbers of K562 cells demonstrate the exceptional sensitivity and dynamic range delivered by the ViaLight™ Plus BioAssay Kit.

EC 50 Data Generated Using ViaLight Plus Shows Consistency Over Time



HepG2 cells were incubated with the alkylating agent Mitomycin C for 48 hours and then assayed using ViaLight™ Plus. The experiemental values are the mean of eight replicate samples read every hour over a 5 hour period. The EC values remain consistent over the 5 hour read period.

Ordering Information – BioAssay Kit

Cat. No. NA	Cat. No. EU	Product Name	Product Description	Storage Conditions	Size
LT07-322	LT07-322	ViaLight™ MDA Plus Microbial Proliferation and Cytotoxicity BioAssay Kit		2°C to 8°C, do not freeze*	10,000 tests
LT07-122	LT07-122	ViaLight™ MDA Plus Microbial Proliferation and Cytotoxicity Kit		2°C to 8°C, do not freeze*	1,000 tests
LT17-221	LT17-221	ViaLight™ Plus Cell Proliferation and Cytotoxicity BioAssay Kit	With 5 white TC plates	2°C to 8°C, do not freeze*	500 tests
LT07-321	LT07-321	ViaLight™ Plus Cell Proliferation and Cytotoxicity BioAssay Kit		2°C to 8°C, do not freeze*	10,000 tests
LT07-221	LT07-221	ViaLight™ Plus Cell Proliferation and Cytotoxicity BioAssay Kit		2°C to 8°C, do not freeze*	500 tests
LT07-121	LT07-121	ViaLight™ Plus Cell Proliferation and Cytotoxicity BioAssay Kit		2°C to 8°C, do not freeze*	1,000 tests

*Product may be stored frozen after reconstitution

Related Products	Page
RAFT™ 3D Cell Culture System	272
ATP Standard	292
Clear Bottom, White Walled TC Plates	292
ToxiLight™ Non-destructive Cytotoxicity BioAssay Kit	280

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ToxiLight™ Non-destructive Cytotoxicity BioAssay Kit

The ToxiLight™ Non-destructive Cytotoxicity BioAssay Kit is a bioluminescent, non-destructive cytolysis assay kit designed to measure the release of the enzyme adenylate kinase (AK) from damaged cells. The enzyme actively phosphorylates ADP to form ATP and the resulting ATP is measured using a bioluminescent luciferase reaction. As the level of cytolysis increases, the amount of AK in the supernatant also increases, which results in emission of higher light intensity by the ToxiLight™ Reagent. There is no need for cell lysis; measurements can be taken directly from the supernatant.

Benefits

- **Highly sensitive** – Detect as few as ten cells
- **Non-destructive** – Eliminates the need to lyse cells, allowing multiple tests on the same sample
- **Simple** – Addition of a single reagent directly to cells or supernatant aliquot
- **Fast** – Results from a 96-well plates can be processed and analyzed in <10 minutes
- **Flexible** – Supernatants can be frozen for long term studies with no loss of AK activity

Applications

- Cytotoxicity studies
- High throughput content screening
- Combination assays

2°C to 8°C, do not freeze prior to reconstitution

www.lonza.com/toxilight

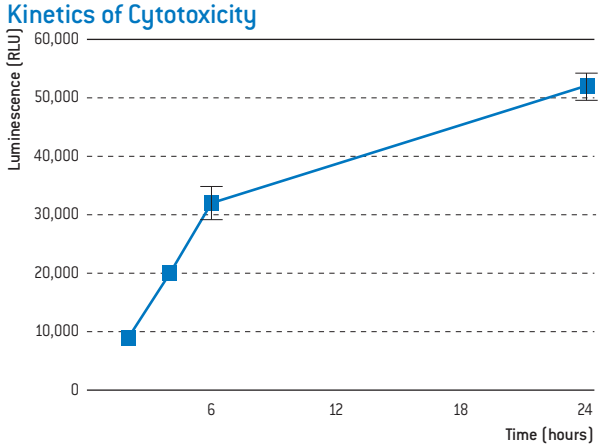
Specifications	
Number of tests per kit:	500x (5 × 96-well pl ates) 1,000x (10 × 96-well plates) 10,000x (100 × 96-well plates)
Detection limit:	10 dead cells per well in homogeneous mode and 50 dead cells per well when the supernatant is sampled from the wells
Assay time:	1 second integrated reading per sample <15 minutes per 96-well plate
Suitable cell types:	All mammalian cells, adherent and non-adherent
Operating temperature:	Ambient
Linear range:	Greater than three orders of magnitude
Reproducibility:	Typical coefficient of variation (CV) ≈5%
Correlation:	Shows excellent correlation with other membrane permeability assays such as propidium iodide
Recommended equipment:	Microplate luminometer with or without reagent injectors. Microplate liquid scintillation counter with luminescence (i.e. out of coincidence) mode

Ordering information on the next page.

ToxiLight™ Non-destructive Cytotoxicity BioAssay Kit

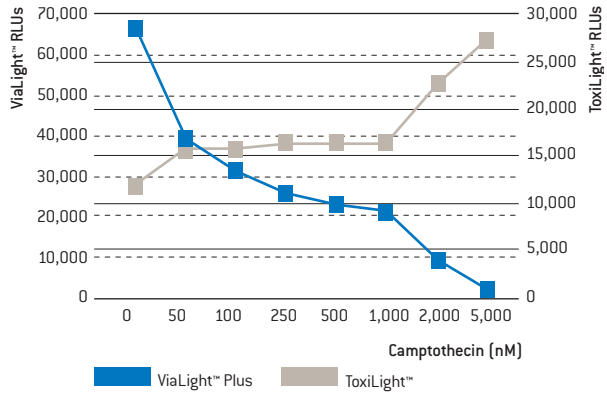
Continued

Kinetics of Cytotoxicity



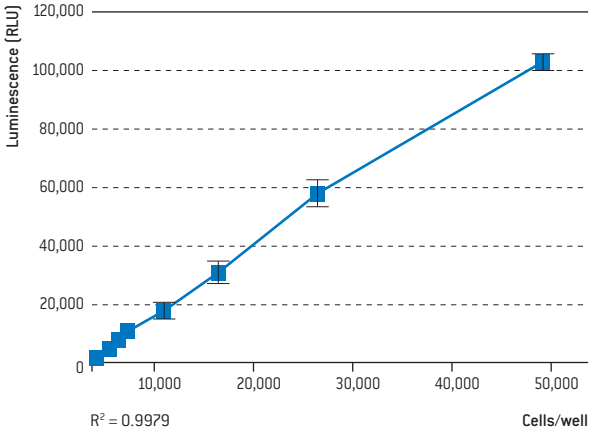
Samples (20 µL) of culture supernatant from cells treated with camptothecin were collected at various times and assayed for cytotoxicity.

Identify Dose-dependent Activities in Cells



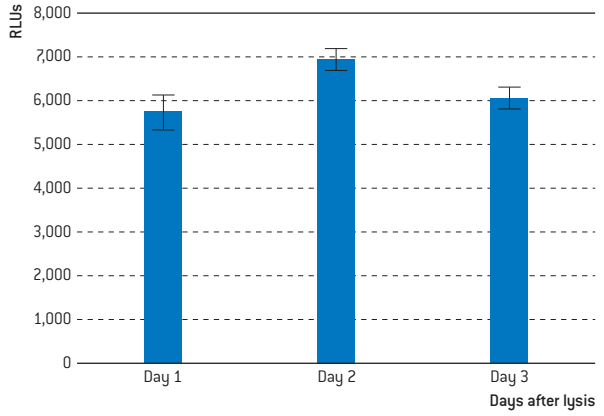
Comparison of ViaLight™ Plus and ToxiLight™ Kits using HUVECs dosed with camptothecin. The ATP levels indicated by the ViaLight™ Plus RLUs reduce steadily in a dose-dependent manner. At the lower drug doses, the AK released from the cells is relatively low compared with that of the control, only increasing dramatically at the highest drug doses.

ToxiLight™ BioAssay Kit is Sensitive Down to Ten Cells



Exceptional sensitivity and wide dynamic range results in exceptional experimental flexibility.

Adenylate Kinase is Stable Over Three Days



Jurkat cells were seeded at 10^5 cells/mL and immediately lysed using the ToxiLight™ 100% Lysis Reagent. The stability of the released AK was measured at 24 hours, 48 hours, and 72 hours after release with no significant loss in activity.

Ordering Information – BioAssay Kit

Cat. No. NA	Cat. No. EU	Product Name	Product Description	Storage Conditions	Size
LT17-217	LT17-217	ToxiLight™ Non-Destructive Cytotoxicity BioAssay Kit	With 5 white TC plates	2°C to 8°C, do not freeze*	500 tests
LT07-117	LT07-117	ToxiLight™ Non-Destructive Cytotoxicity BioAssay Kit		2°C to 8°C, do not freeze*	1,000 tests
LT07-217	LT07-217	ToxiLight™ Non-Destructive Cytotoxicity BioAssay Kit		2°C to 8°C, do not freeze*	500 tests
LT07-517	LT07-517	ToxiLight™ 100% Lysis Control Set	Sold separately	2°C to 8°C, do not freeze	200 tests (10 mL)

*Product may be stored frozen after reconstitution

Related Products	Page
RAFT™ 3D Cell Culture System	272
ViaLight™ Plus, 500 test kit	278
Clear Bottom, White Walled TC Plates	292

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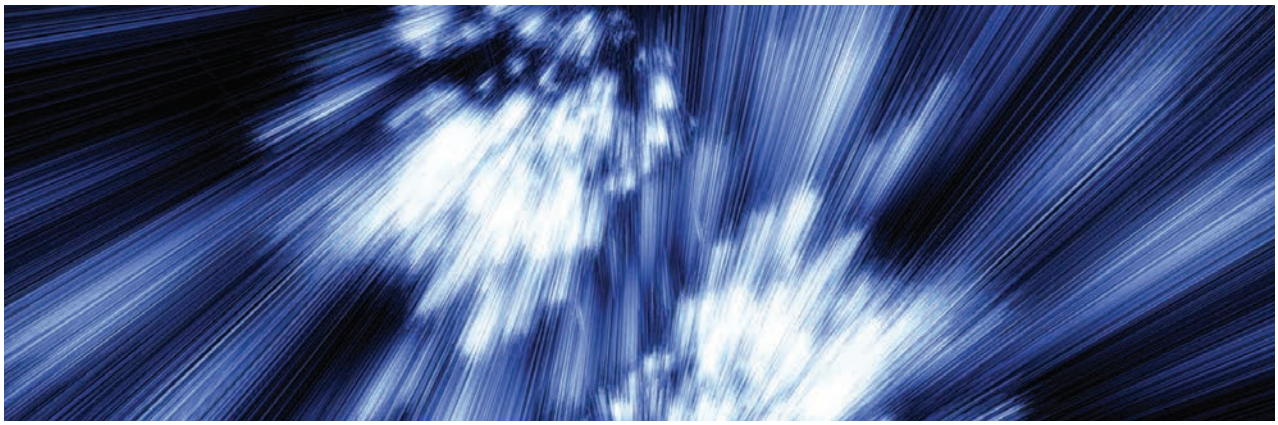
Cell Function



Cell Function

Introduction

The first group of cell function assays is mainly applied in high-throughput screening environments. They are homogeneous, high sensitivity, luminescence-based assays for enzyme targets including phosphodiesterases (PDELight™) and cyclases (PPiLight™).

The second group of cell function assays measure the specific activities of different cell types including cell lines and primary cells. Adipocytes, MSCs, and ADSCs can have lipid metabolism measured with AdipoRed™. Bone cells like osteoclasts and osteoblasts, and even differentiated MSCs and ADSCs can have bone remodeling measured with OsteoAssay™, OsteoLyse™ and OsteoImage™.

PDELight™ HTS cAMP Phosphodiesterase Assay Kit

The PDELight™ HTS cAMP Phosphodiesterase Assay Kit is a generic, homogeneous assay designed for use in high-throughput screening to identify inhibitors of phosphodiesterase activity and IC_{50} determinations. The assay utilizes a robust and highly sensitive luciferase-based bioluminescent system to quantify the AMP produced from the hydrolysis of cyclic AMP by phosphodiesterases. AMP is directly converted to ATP and quantitated as light, with nearly a photon of light emitted for every molecule of ATP produced. The assay is sensitive, robust and reproducible. Unlike other phosphodiesterase assays, the PDELight™ Kit does not require the use of expensive radioactive isotopes, beads, modified substrates, or antibodies.

Benefits

- **Simple** – Only one reagent to add
- **Generic platform** – The same assay can be used for all cAMP dependent phosphodiesterases
- **Rapid assay** – Complete a 96-well plate in <3 minutes
- **Sensitivity** – Allows for the use of enzyme in 96-well format
- **Reproducible and robust** – Typical Z´ values >0.8, with good, clean hits

Applications

- cAMP dependent phosphodiesterase activity screening
- IC_{50} determinations

Specifications

- AMP range: <10 nM–20 µM
- Phosphodiesterases: cAMP phosphodiesterases
- Reproducibility: Typical coefficient of variation (CV) is <5%. Typical Z´ value >0.8
- Assay time: <3 minutes per plate

2°C to 8°C, do not freeze prior to reconstitution

PDELight™ Kit Protocol

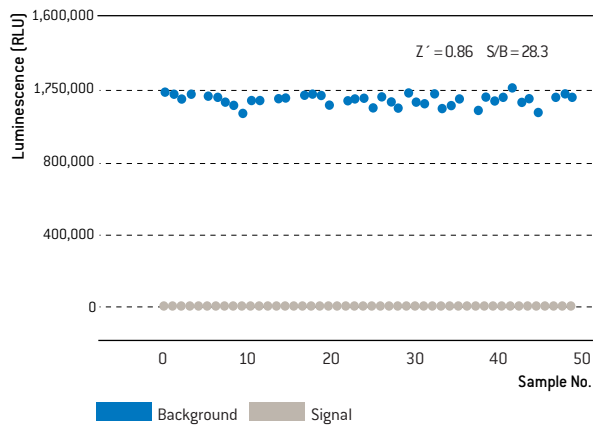
10 µL of inhibitor (40 µM in 10% DMSO)
+
10 µL phosphodiesterase
+
20 µL of cAMP substrate (40 µM)
(Incubate for 30–60 minutes at room temperature)
+
20 µL of PDELight™ Detection Reagent
(Incubate for 10 minutes at room temperature)
▼
Measure luminescence
(0.1–1 second/well)

Ordering information on the next page.

PDELight™ HTS cAMP Phosphodiesterase Assay Kit

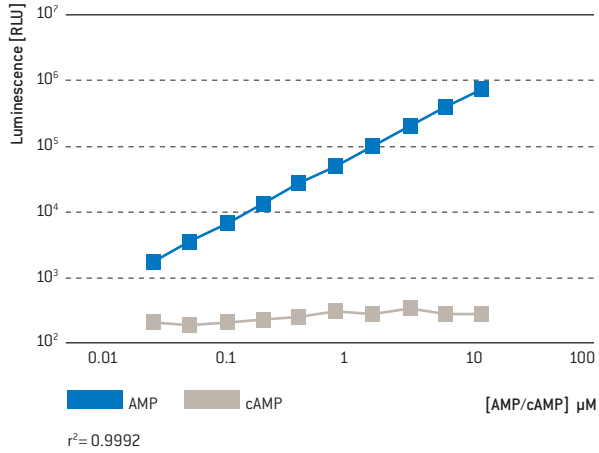
Continued

Reproducible, High Signal to Background Ratios



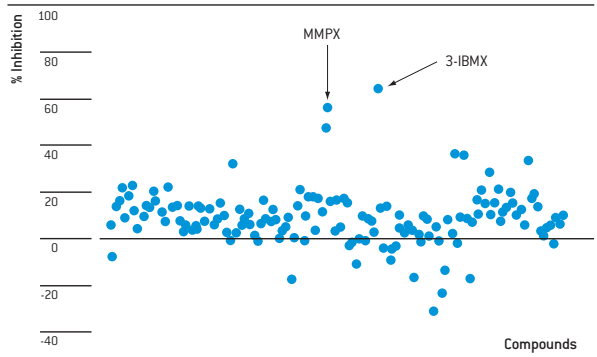
Signal and background determinations were assessed using a single phosphodiesterase demonstrating typical high quality data. Z´ results are typically greater than 0.8 with excellent signal to background ratios.

Linear Detection of AMP

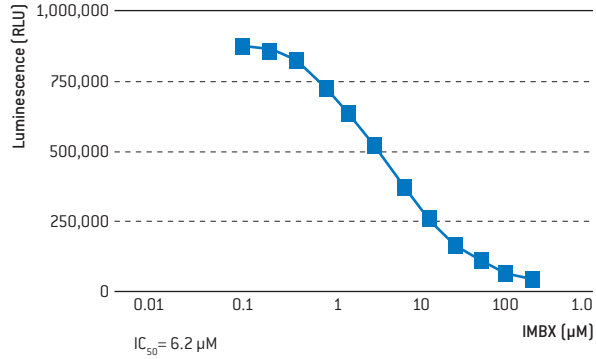


The PDELight™ Kit measures the AMP produced as a result of phosphodiesterase activity. The PDELight™ Detection Reagent measures AMP up to 20 µM. The PDELight™ Detection Reagent is specific for AMP and not cAMP.

Rapid Screening and IC_{50} Determinations with the PDELight™ Assay Kit



Left Image: A library containing 150 pharmacologically active compounds was screened using the PDELight™ Kit. The compounds MMPX and 3-IBMX were identified as inhibiting phosphodiesterase activity greater than 50% at 10 µM.



Right Image: An IC_{50} of 6.2 µM was determined for 3-IBMX.

Ordering Information – Assays and Reagents

Cat. No. NA	Cat. No. EU	Product Name	Storage Conditions	Size
LT07-600	LT07-600	PDELight™ HTS cAMP Phosphodiesterase Assay Kit	2°C to 8°C, do not freeze*	500 tests

*Product may be stored frozen after reconstitution

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PPiLight™ Inorganic Pyrophosphate Assay

Inorganic pyrophosphate (also called diphosphate, pyrophosphoric acid or PPi) is a small diphosphate molecule that is required as a substrate for the product formed from a number of different enzymatic reactions. Enzymes that utilize PPi as a substrate may include phosphotransferases and pyrophosphatases. Enzymes that generate PPi are more numerous and may include cyclases, hydrolases and ligases.

The PPiLight™ Inorganic Pyrophosphate Assay is a non-radioactive bioluminescent assay for the detection of inorganic pyrophosphate. In the presence of PPi, the detection reagent catalyses the conversion of AMP to ATP. The assay uses luciferase, which produces light from the newly formed ATP and luciferin.

Benefits

- **Fast** – Measure enzyme activity via pyrophosphate consumption in 1 hour
- **Simple** – Easy two-step luminescent assay with no radioactive substrates, beads or antibodies required
- **Wide detection range** – Linear range from 0.02 µM to 10 µM
- **Sensitive** – Sensitive to 0.02 µM
- **Versatile** – Scalable up to 96-well plates

Applications

- Measure activity of phosphotransferases and pyrophosphatases
- Measure activity of cyclases, ligases, hydrolases and DNA polymerases

Specifications

- Number of tests: 500 tests in 96-well plates
- PPi range: 0.02 µM–10 µM in a 100 µL sample
- Assay time: 1 hour
- Operating temperature: Ambient
- Reproducibility: r^2 value >0.95

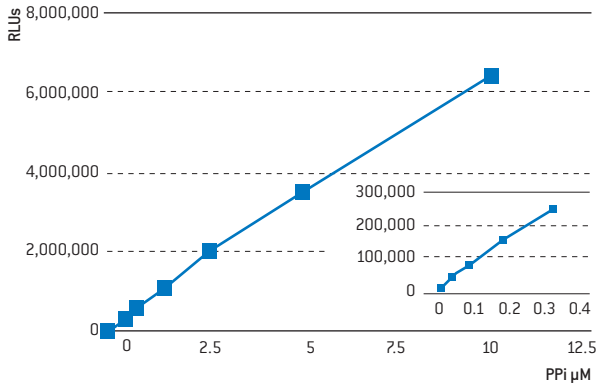
2°C to 8°C, do not freeze prior to reconstitution

Ordering information on the next page.

PPiLight™ Inorganic Pyrophosphate Assay

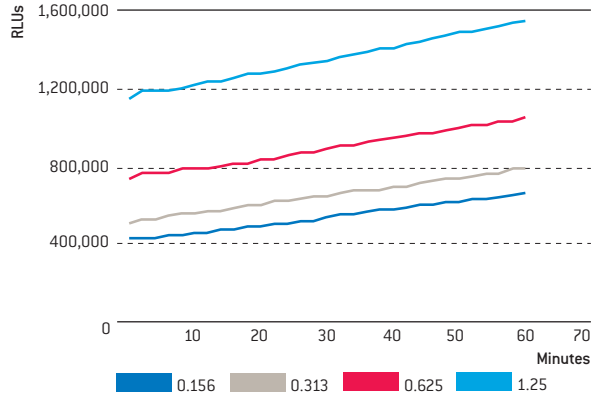
Continued

Light Produced Directly Proportional to PPi Present



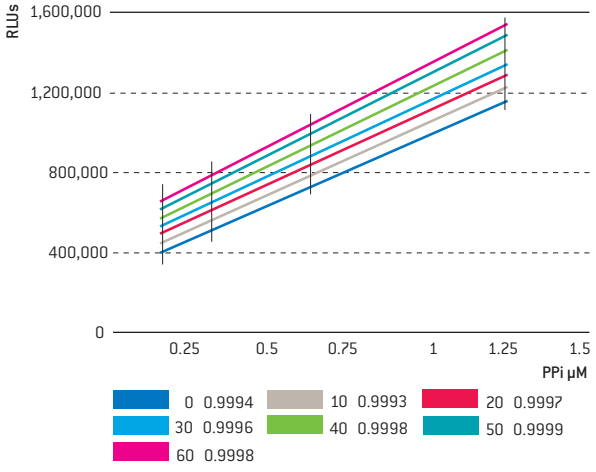
Typical linear PPi standard curve using the PPiLight™ Inorganic Pyrophosphate Assay. Sensitivity is typically 0.02 µM to 10 µM with r^2 values >0.95.

Light Increases Proportionally to PPi Concentration



PPi signal increases over time at a steady, proportional rate as PPi concentration increases. Signal linearity is constant throughout a 1 hour incubation.

Linear Signal



The linearity of the signal generated with varying concentrations of PPi was assessed over 1 hour. Linearity is not affected by PPi concentration increase.

Ordering Information – Assays and Reagents

Cat. No. NA	Cat. No. EU	Product Name	Storage Conditions	Size
LT07-610	LT07-610	PPiLight™ Inorganic Pyrophosphate Assay	2°C to 8°C, do not freeze*	500 tests

*Product may be stored frozen after reconstitution

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AdipoRed™ Assay Reagent

Quantify Intracellular Lipid Accumulation

The AdipoRed™ Assay Reagent is designed for assessing the effect of compounds on the differentiation of preadipocytes or on lipid utilization in mature adipocytes. The lipophilic AdipoRed™ Assay Reagent specifically partitions into the fat droplets of differentiated adipocytes and fluoresces at 572 nm.

This objective, high-throughput, homogeneous, fluorescence-based assay quantifies the accumulation of intracellular triglycerides and provides significant advantages to drug discovery efforts in the field of obesity and diabetes research. It is more sensitive than other methods, such as the Oil Red O assay, and is much faster and easier than Northern and Western blots.

Benefits

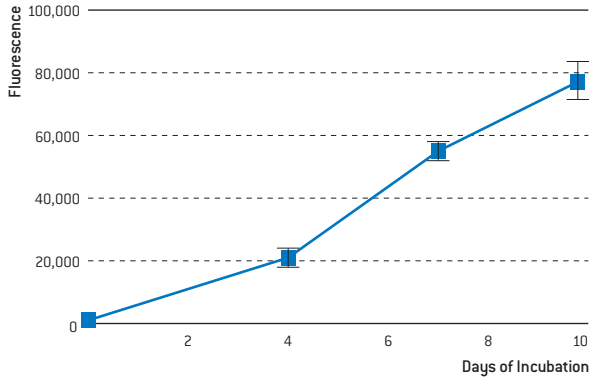
- **Convenient** – Simply replace cell culture medium with PBS, add AdipoRed™ Reagent and read in a standard fluorometer
- **Fast** – Process an entire 96-well plate in as little as 20 minutes
- **Effective** – Provides objective, high-throughput measurement of the accumulation of intracellular triglycerides, with high signal-to-noise ratios

Applications

- Differentiation of preadipocytes
- Lipid utilization

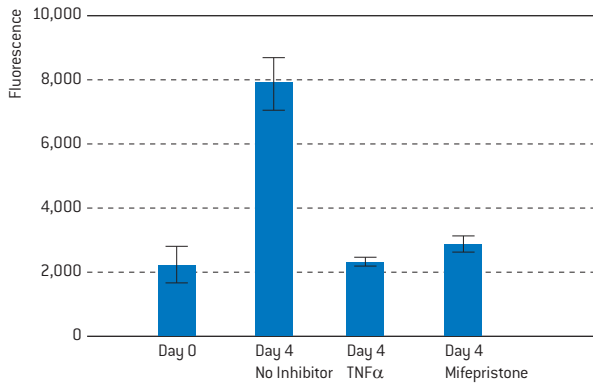
15°C to 30°C

Quantitation of Intracellular Triglyceride Accumulation



Poietics™ Primary Human Preadipocytes were induced to differentiate and assayed using the AdipoRed™ Assay Reagent.

Inhibition of Adipocyte Differentiation Assayed with AdipoRed™ Assay Reagent



Poietics™ Primary Human Preadipocytes were induced to differentiate in the presence of TNFα, Mifepristone or no inhibitor. Lipid accumulation was assayed after 4 days in culture.

Ordering Information – Assays and Reagents

Cat. No. NA	Cat. No. EU	Product Name	Storage Conditions	Size
PT-7009	PT-7009	AdipoRed™ Assay Reagent	15°C to 30°C	5 × 4 mL

Related Products	Page
Adipose Derived Stem Cells	19
Human Mesenchymal Stem Cells	29
Human Subcutaneous and Visceral Preadipocyte Cells	27
PGM™ 2 Preadipocyte Growth Medium-2 BulletKit™	28

OsteoAssay™ Human Bone Plate

Measure Osteoclastic Bone Resorption

The OsteoAssay™ Human Bone Plate provides a thin layer of adherent human bone for the culture of primary human or non-human osteoclasts, osteoclast precursors, and immortalized cell lines. Cells can be stained with standard cytochemical (e.g., TRAP) or immunofluorescent techniques. Assays for measuring bone resorption and/or enzyme activity can be performed easily by sampling the cell culture supernatant.

Benefits

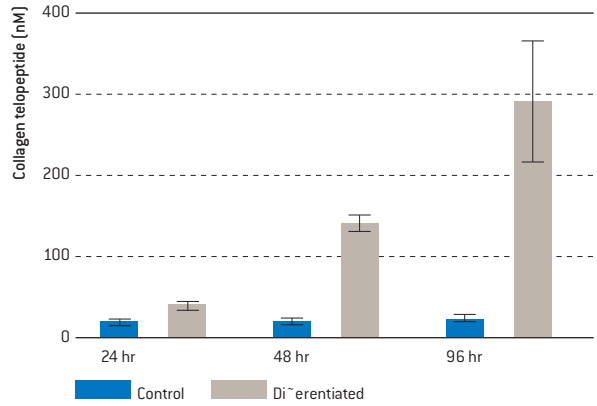
- **Convenient** – Ready-to-use plates with human bone chips attached to wells eliminates the need for dentine or animal bone slices
- **Simple** – Cells can be seeded onto the surface of the OsteoAssay™ Plate using traditional cell culture protocols
- **Flexible** – Can be used with a variety of cell types and cell-based assays
- **Novel** – Contains real human bone for more biologically relevant results

Applications

- Bone resorption
- Osteoclast precursor differentiation
- Osteoclast enzymatic activity

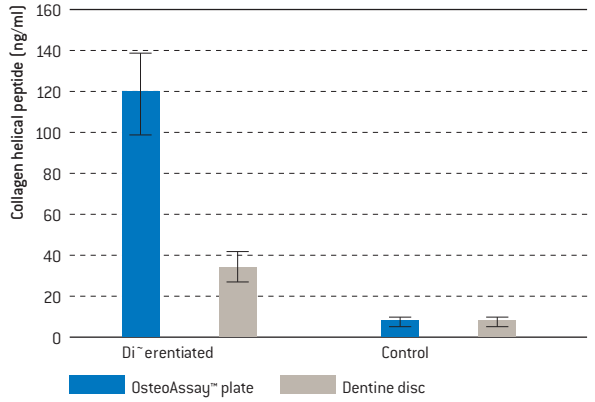
-20°C

Time Course of *in vitro* Osteoclast Resorptive Activity Assayed with the OsteoAssay™ Plate and a Telopeptide EIA Kit



The release of collagen peptides from the OsteoAssay™ Plate by differentiating primary human osteoclasts is linear with time. Poietics™ Osteoclast Precursors were seeded onto an OsteoAssay™ Plate at 10,000 cells/well and cultured in medium containing M-CSF +/- soluble RANK ligand. After 5 days of culture, the medium was renewed. Samples of supernatant were harvested after an additional 24, 48 and 96 hours and used in an EIA assay for a telopeptide.

OsteoAssay™ Plate is Superior to Dentine Slices



Comparison of primary human osteoclast function (*in vitro* bone degradation) when cultured on an OsteoAssay™ Plate vs. dentine slices. Poietics™ Human Osteoclast Precursors were seeded at 10,000 cells/well in the presence of either M-CSF alone (undifferentiated control) or both M-CSF and soluble RANK ligand (differentiated) for 5 days. Media were renewed after 5 days and supernatants were harvested after an additional 1 day of culture and assayed for collagen peptides.

Ordering Information – Assays and Reagents

Cat. No. NA	Cat. No. EU	Product Name	Storage Conditions	Size
PA-1000	PA-1000	OsteoAssay™ Human Bone Plate	-20°C	96-wells

Related Products	Page
Human Osteoclast Precursors	25
OCP Osteoclast Precursor BulletKit™	25
OsteoImage™ Mineralization Assay	290
OsteoLyse™ Assay Kit (Human Collagen)	289

North America – Customer Service: +1 800 638 8174 (toll free); order.us@lonza.com; Scientific Support: +1 800 521 0390 (toll free) scientific.support@lonza.com

OsteoLyse™ Assay Kit (Human Collagen)

Measure Bone Resorption in Minutes

The OsteoLyse™ Assay Kit provides easy-to-use reagents for quantitatively measuring *in vitro* osteoclast-mediated bone matrix resorption in a high-throughput format. The kit includes a 96-well cell culture plate coated with Europium-labeled human Type I collagen and a bottle of Fluorophore Releasing Agent. Osteoclasts can be seeded onto the OsteoLyse™ Plate using traditional cell culture protocols. The assay directly measures the release of Europium-labeled collagen fragments (resorptive activity) into the osteoclast cell culture supernatant via time resolved fluorescence.

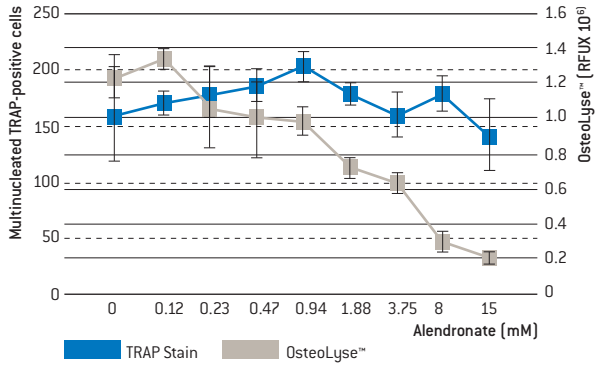
Benefits

- **Convenient** – Human collagen is bound to wells in the plate eliminating the need to purchase bone matrices separately
- **Easy-to-use** – Cells can be seeded onto the surface of the OsteoLyse™ Plate using traditional cell culture protocols
- **Homogeneous** – Resorptive activity is easily measured by simply sampling the cell culture supernatant and counting via time-resolved fluorescence

Applications

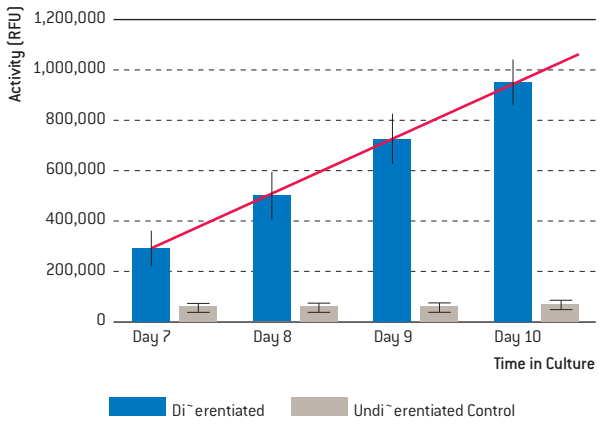
- Osteoporosis
- Bone resorption
- Osteoclast precursor differentiation
- Mature osteoclast enzyme activity
- Cancer research: metastasis/collagen degradation

A comparison of TRAP and OsteoLyse™ Assay Kits in Alendronate-mediated Osteoclast Function



Poietics™ Primary Human Osteoclast Precursors were seeded onto an OsteoLyse™ Plate at 10,000 cells/well and differentiated with M-CSF and soluble RANK ligand in the presence of interferon γ. At day 10 of culture, 10 µl of supernatant was removed and counted. The blue line denotes TRAP data (day 10 multinucleated TRAP-positive cells/well) while the greyline represents OsteoLyse™ Assay data.

Human Osteoclast Activity Measured by CollagenRelease Using the OsteoLyse™ Assay Kit



Poietics™ Primary Human Osteoclast Precursors were seeded onto an OsteoLyse™ Plate at 10,000 cells/well and differentiated with M-CSF and soluble RANK ligand. At days 7, 8, 9 and 10 of culture, 10 µL of supernatant was removed and counted. The blue bars represent counts obtained when the precursors were cultured with M-CSF only.

Ordering Information – Assays and Reagents

Cat. No. NA	Cat. No. EU	Product Name		Storage Conditions	Size
PA-1500	PA-1500	OsteoLyse™ Assay Kit	Human Collagen	4°C to 8°C	96-wells

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Human Osteoclast Precursors	25
OCP Osteoclast Precursor BulletKit™	25
OsteoImage™ Mineralization Assay	290

OsteoImage™ Mineralization Assay

Rapid, Flourescent Assay for Bone Mineralization

The OsteoImage™ Mineralization Assay is a rapid, fluorescent, *in vitro* assay for assessing bone cell mineralization. The assay can quantitate *in vitro* mineralization by osteogenic stem cells, primary osteoblasts, and osteoblast-like cell lines. It is based on specific binding of the fluorescent OsteoImage™ Staining Reagent to the hydroxyapatite portion of bone-like nodules deposited by cells. The assay is sufficiently sensitive to detect the time-dependent increases in mineralization in differentiating osteoblast cultures.

Unlike typical histochemical methods, such as von Kossa and Alizarin Red, neither of which is hydroxyapatite specific, the OsteoImage™ Assay eliminates multiple steps or tedious extraction steps. This latest addition to our line of products for bone research helps you to increase the speed, sensitivity and ease of measuring mineralization in your cell cultures.

Benefits

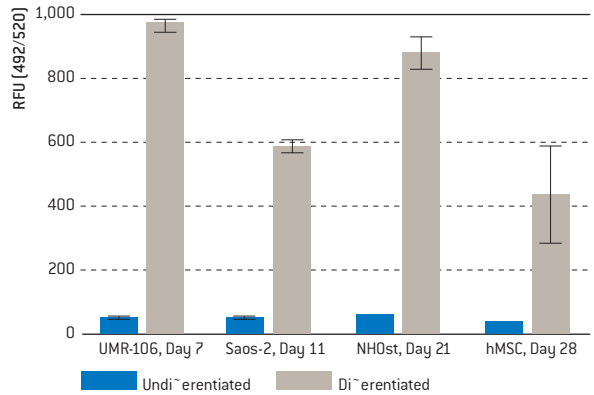
- Delivers qualitative, visual fluorescent microscopy or quantitative plate reader results
- Can be used with primary osteoblasts, osteoblast stem cells, and osteoblast cell lines
- Measures hydroxyapatite, similar to real bone
- Completed in <90 minutes, without tedious extractions
- Sensitive enough to detect time-dependent increases in mineralization in differentiating cells
- Scalable for use in 6-well up to 96-well plates

-20°C

Simple Protocol

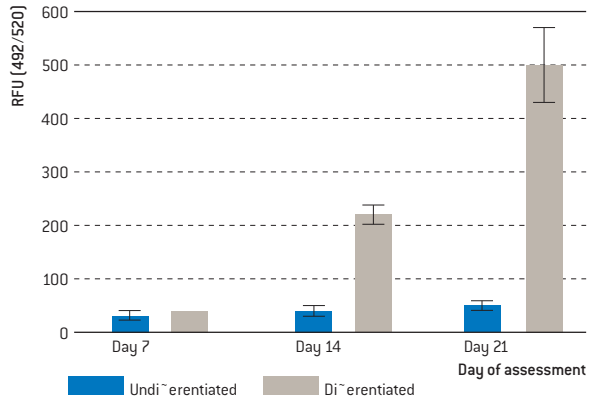
Culture cells
▼
Remove media and wash with PBS
▼
Fix cells (20 minutes and wash)
▼
Add OsteoImage™ Staining Reagent (incubate 30 minutes)
▼
Wash three times
▼
View under fluorescence microscope or read on plate reader

Works with Stem Cells, Primary Cells, and Cell Lines



Osteoblast cell lines, Clonetics™ NHOst – Normal Human Osteoblasts, and osteoblast-differentiated Poietics™ hMSC Human Mesenchymal Stem Cells were evaluated for mineralization with the OsteoImage™ Mineralization Assay on a 96-well plate reader.

Detects Mineralization with Time



NHOst – Normal Human Osteoblasts were seeded at 3,200 cells/well in a 96-well plate. Cells were cultured as undifferentiated control cells or with differentiation factors. Mineralization was quantitated on a plate reader after staining with the OsteoImage™ Assay on days 7, 14 and 21.

Ordering Information – Assays and Reagents

Cat. No. NA	Cat. No. EU	Product Name	Storage Conditions	Size
PA-1503	PA-1503	OsteoImage™ Mineralization Assay	-20°C	5 × 96-wells

Related Products	Page
Human Mesenchymal Stem Cells	29
Human Osteoblast Cells and Growth Medium	84

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BioAssay Accessory Products

Clear Bottom, White-Walled Tissue Culture Plates

Clear Bottom, White-walled Tissue Culture Plates are white-walled 96-well plastic plates designed specifically for use with any bioluminescent bioassay kit.

The ATP Standard

The ATP Standard is a specialized aqueous preparation of adenosine triphosphate (ATP) and is primarily intended for use in research to calibrate ATP assays based on the luciferase bioluminescence technique. Each vial contains 5 mL of 10 µM ATP.

-20°C

Ordering Information – Labware

Cat. No. NA	Cat. No. EU	Product Name	Product Description	Size
LT27-102	LT27-102	Tissue Culture Plates	Clear bottom, white-walled	25 plates

Ordering Information – Kits

Cat. No. NA	Cat. No. EU	Product Name	Storage Conditions	Size
LT27-008	LT27-008	ATP Standard	-20°C	5 mL