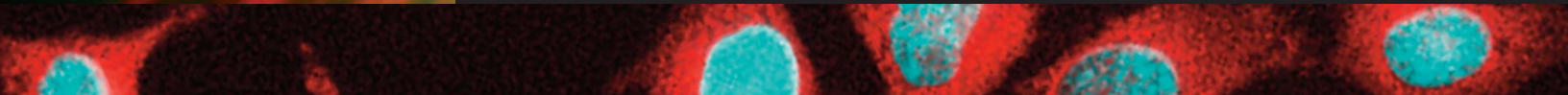


# Thermo Scientific Cellomics HCS and Cellular Imaging Kits Version 2



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# Thermo Scientific Cellomics HCS Reagent Kits

## New kits expand your ability to realize the full potential of Cellular Imaging

Large pack sizes available  
—  
Custom packing available

The use of appropriate combinations of fluorescent probes, antibodies and reagents can help realize the full potential of powerful cellular imaging. Thermo Scientific Cellomics HCS Reagent Kits provide just such a combination in an easy-to-use kit, with methods and reagents to prepare imaging-quality samples for automated cell-based assays. These kits are an integral part of the Thermo Scientific Cellomics Total Solution HCS Platform, allowing a wide range of biologies to be investigated with ease. Each kit is designed for a specific biology and rigorously validated and optimized for HCS/HCA.

### Highlights:

- Customized components and bulk quantities available
- Flexible – available in multiplex or singleplex configurations
- Optimized protocol and reagent preparations included for reproducible results
- Validated on Thermo Scientific Cellomics ArrayScan Instruments, but the kits also work on other HCS platforms and with fluorescence microscopes
- Wide range of targets for cell signaling, toxicity and cell phenotype changes



All kits use a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates.

The primary antibodies selected for each kit are specific for their targets and have minimal cross-reactivity with other targets.

## Thermo Scientific Cellomics Cell Signaling and Transcription Factor Kits

### Beta-Catenin Activation

Our Beta-Catenin Activation Kit enables measurement of the intracellular distribution of  $\beta$ -catenin and its translocation to the nucleus. The kit contains a polyclonal anti- $\beta$ -catenin rabbit primary antibody, a goat anti-rabbit secondary antibody conjugated to the Thermo Scientific DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence labeling of  $\beta$ -catenin HCS assays.

Signaling through the Wnt pathway via the nuclear translocation of the key transcription factor  $\beta$ -catenin is critical for cell growth and differentiation during development.  $\beta$ -catenin is located mostly in the adherens junctions of epithelial cells associated with E-cadherin, but also in cytoplasmic pools complexed with APC. In the absence of Wnt signaling,  $\beta$ -catenin is phosphorylated by both casein kinase 1a (CK1a) and glycogen synthase kinase 3b (GSK3b), thus targeting this protein for ubiquitination and subsequent proteolysis.

Product #	Description	Pkg. Size
8403601	Beta Catenin Activation	1 x 96
8403602		5 x 96

### c-Jun Activation

c-Jun is activated through phosphorylation in the activation domain by Jun-N-terminal kinases (JNKs). Phosphorylated Jun family members then form homodimers or heterodimeric complexes with Fos, composing the AP-1 transcription factor, which migrates into the nucleus.

Product #	Description	Pkg. Size
K01-0003-1	c-Jun Activation	5 x 96

### ERK MAPK Activation

MAP kinases mediate signal transduction from growth hormones, heat shock, UV radiation, osmolarity or cytokines, to alter transcription factor activity in the nucleus. Aberrant and deregulated functioning of MAP kinases can initiate and support carcinogenesis. Insulin and IGF-1 also activate a mitogenic MAP kinase pathway that may be important in acquired insulin resistance associated with type 2 diabetes.

Product #	Description	Pkg. Size
K01-0007-1	ERK MAPK Activation	5 x 96

## Phospho-JNK Detection

Our Phospho-JNK Detection Kit enables quantitation of phosphorylated Jun N-terminal kinase (phospho-JNK) expression in the nucleus. Phospho-JNK, also referred to as stress-activated protein kinase 1 (SAPK), is measured directly using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. This kit contains an anti-phospho-JNK primary antibody (rabbit monoclonal), a goat anti-rabbit secondary antibody conjugated to Thermo Scientific DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence staining for HCS assays.

Product #	Description	Pkg. Size
8404001	Phospho-JNK Detection	1 x 96
8404002		5 x 96

## PKA Activation

Our PKA Activation Kit enables detection and measurement of activated cAMP-dependent protein kinase A (PKA) in stimulated cells for high-content screening. After stimulation, activated PKA redistributes from the perinuclear region (or perinuclear spots) to the cytoplasm and nucleus, producing a more diffuse staining. This assay measures PKA redistribution using antibody staining and is applicable across many cell types.

Product #	Description	Pkg. Size
8404301	PKA Activation	1 x 96
8404302		5 x 96

## PKC $\alpha$ Activation

The Protein Kinase C (PKC) family is a group of related signal transduction proteins, and their activation is one of the earliest events leading to a variety of cellular responses, including cytokine secretion, differentiation, proliferation, muscle contraction and modulation of membrane excitability. PKC $\alpha$  is believed to play an important role in the development and growth of cancer cells.

Product #	Description	Pkg. Size
K09-0001-1	PKC $\alpha$ Activation	5 x 96

## Transcription Factor I

Our Transcription Factor Activation HCS Reagent Kits are for the simultaneous quantitation of HIF-1 alpha, Phospho-CREB and FOXO3a expression in the same cell. The multiplex kits contain primary antibodies toward HIF-1 alpha, phosphorylated CREB, FOXO3a (rabbit polyclonal, mouse monoclonal, and goat polyclonal, respectively) and secondary antibodies conjugated with DyLight 549 (orange), DyLight 488 (green) and DyLight 649 (red) Fluorophores.

The singleplex kits contain the same primary antibodies and DyLight 549-Conjugated Secondary Antibodies. In cancer cells, rapid proliferation often results in a competition for nutrients and oxygen. Three key transcription factors play a pivotal role in determining cancer cell fate: HIF, CREB and FOXO3a. All respond to both oxidative stress that occurs in rapidly proliferating cells and to growth factor signaling through PI3 kinase (PI3K) and AKT, also known as protein kinase B (PKB). Hypoxia inducible factor 1 (HIF-1) and the cyclic AMP response element binding protein (CREB) promote cell proliferation and enhance metabolism; however, FOXO3a (FKHRL1), a member of the Forkhead family of transcription factors, induces cell cycle arrest or apoptosis.

Product #	Description	Pkg. Size
8401401	Transcription Factor Activation – HIF-1 alpha, Phospho-CREB and FOXO3a	1 x 96
8401402		5 x 96
8401501	Transcription Factor Activation – Phospho-CREB	1 x 96
8401502		5 x 96
8401601	Transcription Factor Activation – HIF-1 alpha	1 x 96
8401602		5 x 96
8401701	Transcription Factor Activation – FOXO3a	1 x 96
8401702		5 x 96

## Transcription Factor II Smad3 and Phospho-CREB

Our multiplexed Smad3 and Phospho-CREB Reagent Kits contain optimized reagents for the simultaneous detection and quantitation of Smad3 and Phospho-CREB activation in the same cell using different compounds. These kits allow direct measurements of Smad3 and Phospho-CREB in the nucleus.

The primary antibodies are specific for their targets and have minimal cross-reactivity with other targets. Two kit versions are available in two package sizes:

- A multiplexed kit for detecting Smad3 and Phospho-CREB simultaneously. This kit contains primary antibodies against Smad3 and Phospho-CREB (rabbit polyclonal and mouse monoclonal, respectively) and secondary antibodies conjugated with DyLight 488 (green) and DyLight 549 (orange) Fluorophores.
- A Smad3 singleplex kit that contains a rabbit polyclonal antibody against Smad3 and a DyLight 549-Conjugated Secondary Antibody.

Product #	Description	Pkg. Size
8402001	Transcription Factor Activation: Smad3 and Phospho-CREB	1 x 96
8402002		5 x 96
8402101	Transcription Factor Activation: Smad3	1 x 96
8402102		5 x 96

## Thermo Scientific Cellomics Cytotoxicity and Apoptosis Kits

### Caspase 3

Our Caspase 3 Activation HCS Reagent Kit contains optimized reagents for the detection and quantitation of caspase 3 activation (cleaved) in the cells. The primary antibody is specific for cleaved caspase 3 from human, mouse and rat and does not recognize full-length caspase 3 or other caspases.

The secondary antibody is conjugated to DyLight 549 Fluor (orange). Caspases are intracellular cysteine proteases that are important in apoptotic cell death in a variety of cell lines. Caspase 3 can be activated by two different pathways: mitochondrial apoptosis and Fas ligand-mediated apoptosis.

Product #	Description	Pkg. Size
8402201	Caspase 3 Activation	1 x 96
8402202		5 x 96

### Caspase 9

Our Caspase 9 Activation Reagent Kit contains optimized reagents for the detection and quantitation of caspase 9 activation in cells. This kit allows direct in-cell measurements using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. The primary antibody is specific for human cleaved caspase 9 and does not cross-react with total caspase 9 or other caspases.

The secondary antibody is conjugated to DyLight 549 Fluor (orange). Caspases are intracellular cysteine proteases that are important in apoptotic cell death in a variety of cell lines. Caspase 9 (ICE-LAP6, Mch6) is a member of the mitochondrial pathway of apoptosis.

Product #	Description	Pkg. Size
8402301	Caspase 9 Activation	1 x 96
8402302		5 x 96

### Cell Viability

The basis of our Viability Assay are Thermo Scientific DeadDye and Thermo Scientific VitalDye Proprietary Fluorescent Probes that enable quantification of the number of live and dead cells, as well as their relative percentages and live/dead ratio, on any standard microplate format.

Product #	Description	Pkg. Size
K02-0001-1	Cell Viability	5 x 96

## Cleaved PARP Detection

Our Cleaved PARP Detection Kit enables detection and quantitation of cleaved PARP in the nuclei. The kit contains a primary monoclonal antibody that detects only the cleaved portion of human PARP, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers that are required for immunofluorescence staining for HCS assays.

Poly (ADP-ribose) polymerase (PARP) cleavage is an important marker of caspase 3-mediated apoptosis. PARP is a 116 kDa nuclear protein involved in repair of DNA nicks induced by various stressors and is one of the substrates for caspase 3, which cleaves PARP into an 85 kDa fragment during apoptosis. In human PARP, cleavage occurs at Asp214 and Gly-215 residues, leading to formation of 89 and 24 kDa fragments. Cleavage of PARP correlates with DNA fragmentation and other morphological changes making it a critical marker of apoptosis.

Product #	Description	Pkg. Size
8402701	Cleaved PARP Detection	1 x 96
8402702		5 x 96

## Cytochrome C Detection

Our Cytochrome C Detection Kit measures release of cytochrome c from mitochondria, a key early step in apoptosis or programmed cell death. The kit contains a mouse monoclonal anti-cytochrome c primary antibody, a secondary antibody conjugated to DyLight 549 Fluorophore, and other reagents and buffers required for immunofluorescent detection of cytochrome c for HCS assays.

Product #	Description	Pkg. Size
8405601	Cytochrome C Detection	1 x 96
8405602		5 x 96

## LC3B and Poly-Ubiquitin Multiplex Detection

Our LC3B and Poly-Ubiquitin Detection Kits enable quantitation of LC3B protein on autophagic vesicles and ubiquitin on polyubiquitinated proteins. Autophagy and the ubiquitin proteasome system constitute two major intracellular protein degradation pathways that are essential during cell starvation, differentiation, aging and death. LC3B participates in the process of mammalian autophagy, also characterized as a caspase-independent programmed cell death.

Autophagy is the catabolic process of sequestering organelles and long-lived proteins in autophagic vesicles, which are eventually digested by lysosomal machinery. The ubiquitin proteasome system controls the stability of numerous proteins that regulate progression through the cell cycle and apoptosis such as cyclins, cyclin-dependent kinases, tumor suppressors and NFκB. Once these proteins are tagged with a single ubiquitin molecule, other ligases are signaled to attach additional ubiquitin. The result is a polyubiquitinated protein that is directed to the proteasome, a large protein complex, where it is degraded.

Product #	Description	Pkg. Size
8407601	LC3B Detection	1 x 96
8407602		5 x 96
8407701	Poly-Ubiquitin Detection	1 x 96
8407702		5 x 96
8407801	LC3B and Poly-Ubiquitin Multiplex Detection	1 x 96
8407802		5 x 96

## Multiparameter Apoptosis 1

Apoptosis is a critical process in the life and death of a cell. Interruption of the process can cause many diseases. Key criteria for determining whether a cell is undergoing apoptosis include morphological changes in the appearance of the cell, as well as alteration in biochemical and molecular markers. The patterns of apoptotic signals are similar, but the details of the pathway vary significantly depending on the cell type and apoptotic inducer.

Product #	Description	Pkg. Size
K04-0001-1	Multiparameter Apoptosis 1	5 x 96

## Multiparameter Cell Death Detection

Our Multiparameter Cell Death Detection Kits for high-content screening (HCS) enable simultaneous quantitation of LC3B protein on autophagic vesicles, cytochrome c localization and its release from mitochondria, cell membrane integrity and its permeability and nuclear morphology and DNA content. These cellular properties are measured directly using fixed end-point assay and fluorescence detection in cells grown on standard high-density microplates. The kits contain highly specific primary antibodies, DyLight-conjugated Secondary Antibodies and other reagents and buffers required to stain cells for HCS assays.

Product #	Description	Pkg. Size
8408001	Multiparameter Cell Death Detection	1 x 96
8408002		5 x 96

## Multiparameter Cytotoxicity 1

The Multiparameter Cytotoxicity 1 HCS Reagent Kit is an *in vitro* assay tool that allows users to rapidly acquire information on the changes in the following cellular properties: (1) nuclear morphology/size, (2) cell membrane permeability, (3) lysosomal mass-pH and (4) cell density (number of cells per field). This kit differs from the Multiparameter Cytotoxicity 2 Kit in that the dyes are supplied as a cocktail as well as not measuring mitochondrial potential.

Product #	Description	Pkg. Size
K02-0002-1	Multiparameter Cytotoxicity 1	5 x 96

## Multiparameter Cytotoxicity 2

Our Multiparameter Cytotoxicity 2 HCS Reagent Kits contain optimized reagents for simultaneous detection and quantitation in the same cell of changes in nuclear morphology and size, changes in the cell membrane's permeability status, changes in cell density (number of cells per field) from the compound toxicity, and changes induced to EITHER the lysosome's mass or pH OR the mitochondria's transmembrane potential.

Product #	Description	Pkg. Size
8400001	Multiparameter Cytotoxicity 2	1 x 96
8400002	containing both Lysosome and Mitochondrial Probes	5 x 96
8400101	Multiparameter Cytotoxicity 2	1 x 96
8400102	containing Lysosome Probe	5 x 96
8400201	Multiparameter Cytotoxicity 2	1 x 96
8400202	containing Mitochondrial Probe	5 x 96

## Multiparameter Cytotoxicity 3

Our Multiparameter Cytotoxicity 3 Kit enables simultaneous measurement of six orthogonal cell-health parameters: cell loss, nuclear morphology, DNA content, cell membrane permeability, mitochondrial membrane potential changes and cytochrome c localization and release from mitochondria. The kit contains a Hoechst dye, cell permeability dye, mitochondrial membrane potential dye, and a mouse monoclonal antibody against cytochrome c and a goat anti-mouse DyLight 649-conjugated Secondary Antibody, and various other essential reagents and buffers.

Product #	Description	Pkg. Size
8408102	Multiparameter Cytotoxicity 3	5 x 96

## Thermo Scientific Cellomics Genotoxicity, DNA Damage and Repair Kits

### Ku70/80 Activation

Our Ku 70/80 Activation Kit contains optimized reagents for the detection and quantitation of Ku70/80 in the nuclei of cells. The kit contains a primary monoclonal antibody specific for human Ku70/80 heterodimers, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence labeling of Ku70/80 for HCS analysis.

The Ku70/80 heterodimer plays an important role in DNA double-strand break (DSB) repair. During DSB repair by non-homologous end joining (NHEJ), Ku 70/80 binds with high affinity to DNA ends of a DSB and then recruits the catalytic domain of DNA protein kinase (DNAPK). The formation of DNAPK complex at the site of DSBs results in the recruitment of other repair proteins to ligate the broken ends. Recently, Ku70/80 was identified as having a role in the ATM-dependent activation of ATR during DNA DSB damage response.

Product #	Description	Pkg. Size
8403101	Ku70/80 Activation	1 x 96
8403102		5 x 96

### MDM2 and p53

Our MDM2 and p53 Detection HCS Reagent Kits are for the simultaneous quantitation of MDM2 and p53 expression in the same cell. These kits allow direct measurements of MDM2 and p53 in the nucleus using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates.

The orange p53 and green MDM2 multiplex kits contain primary antibodies toward p53 and MDM2 (rabbit polyclonal and mouse monoclonal, respectively) and secondary antibodies conjugated with DyLight 488 (green) and DyLight 549 (orange) Fluorophores. The orange MDM2 singleplex kits contain a mouse monoclonal primary antibody toward MDM2 and a DyLight 549-Conjugated Secondary Antibody.

Product #	Description	Pkg. Size
8401801	MDM2 and p53 Detection –	1 x 96
8401802	Orange p53 and Green MDM2	5 x 96
8401901	MDM2 Detection – Orange MDM2	1 x 96
8401902		5 x 96

### Micronucleus

Micronucleus (MN) formation is a hallmark of genetic toxicity; as such, micronuclei are used as indicators of genotoxicity caused by drug candidates or environmental toxins. The *in vitro* micronucleus assay is among a set of genetic toxicology assays wherein cultured cells are treated and scored for micronucleus induction.

Product #	Description	Pkg. Size
K11-0001-1	Micronucleus	5 x 96

### p38 MAPK Activation

p38 MAP kinase (MAPK, Mitogen-activated protein kinase), also known as a CDC-2-related protein kinase or CSBP (cytokine suppressive anti-inflammatory drug binding protein), regulates many cellular processes, including inflammation, cell differentiation, cell growth and death. p38 MAPK is activated in response to a variety of extracellular stimuli, including osmotic shock, cytokines, LPS and anisomycin.

Product #	Description	Pkg. Size
K01-0004-1	p38 MAPK Activation	5 x 96

### p53 and p21 Detection

Our Multiplexed p53 and p21 Detection HCS Reagent Kits are for the simultaneous quantitation of p53 and p21 expression in the same cell. These kits allow direct measurements in the nucleus.

Product #	Description	Pkg. Size
8400601	p53 and p21 Activation Kit containing	1 x 96
8400602	Orange p21 Probe and Green p53 Probe	5 x 96
8400801	p53 Activation Kit containing	1 x 96
8400802	Orange p53 Probe	5 x 96
8400901	p21 Activation Kit containing	1 x 96
8400902	Orange p21 Probe	5 x 96

### Phospho-ATM Activation

Our Phospho-ATM Activation Kit contains optimized reagents for the detection and quantitation of phosphorylated ATM (Ser1981) in the nuclei. The kit contains a primary monoclonal antibody that detects only the phosphorylated form of human ATM, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence staining for HCS assays.

Ataxia telangiectasia mutated kinase (ATM, 350 kDa) is involved in cell cycle check-point signaling and DNA repair. Mutation in the ATM gene leads to ataxia telangiectasia, an autosomal recessive human disease. ATM is auto phosphorylated at Ser1981 upon induction of DNA double-strand breaks (DSBs) leading to rapid check-point signaling. ATM kinase has several identified targets including H2AX, BRCA1, NBS1, Chk1, Chk2 and p53.

Product #	Description	Pkg. Size
8403001	Phospho-ATM Activation	1 x 96
8403002		5 x 96

### Phospho-ATM and p53 Activation

Our Phospho-ATM and p53 Activation Kit contains optimized reagents for the detection and quantitation of phosphorylated ATM (Ser1981) and p53 in the nucleus. The kit contains a monoclonal antibody that detects only the phosphorylated form of human ATM, anti-p53 polyclonal antibody, DyLight-conjugated Secondary Antibodies and various other reagents and buffers for immunofluorescence staining for HCS assays.

Product #	Description	Pkg. Size
8405701	Phospho-ATM and p53 Activation	1 x 96
8405702		5 x 96

### Phospho-Chk2 (Thr68) Activation

Our Phospho-Chk2 Activation Kit contains optimized reagents for the detection and quantitation of phosphorylated Chk2 (Thr68) in the nuclei. The kit contains a primary monoclonal antibody that detects only the phosphorylated form of human Chk2, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence staining for HCS assays.

Chk1 and Chk2 are kinases involved in DNA damage-induced cell-cycle check-point signaling. Chk2 is phosphorylated by ATM kinase in response to DNA damage, and Chk2 activation results in cell-cycle inhibition by p53 phosphorylation and other downstream targets. Phosphorylation at Thr68 is a prerequisite for the subsequent activation step, which is caused by Chk2 autophosphorylation on residues Thr383 and Thr387 in the kinase domain activation loop.

Product #	Description	Pkg. Size
8402801	Phospho-Chk2 Activation	1 x 96
8402802		5 x 96

## Phospho-H2AX Activation

Our Phospho-H2AX Activation Kit contains optimized reagents for the detection and quantitation of phosphorylated H2AX (Ser139) in the nucleus. The kit contains a primary monoclonal antibody that detects only the phosphorylated form of human H2AX, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence staining for HCS assays.

The nucleosome is made of four core histone proteins (H2A, H2B, H3 and H4). H2AX belongs to an H2A family of histones. DSNase damage induction by various agents leads to rapid phosphorylation of H2AX at Ser139 (also known as Gamma H2AX) by ATM, ATR or DNA protein kinase leading to formation of DNA foci at the site of DNA double-strand breaks (DSBs). Phosphorylated H2AX helps in recruiting the proteins responsible for double-strand break repair.

Product #	Description	Pkg. Size
8402901	Phospho-H2AX Activation	1 x 96
8402902		5 x 96

## Phospho-p53 and p53 Detection

Our Multiplexed phospho-p53 and p53 Detection HCS Reagent Kits are for the simultaneous quantitation of phospho-p53 and p53 expression in the same cell. These kits allow direct measurements in the nucleus.

Product #	Description	Pkg. Size
8400501	Phospho-p53 and p53 Activation	1 x 96
8400502	containing Orange Phospho-p53 Probe and Green p53 Probe	5 x 96
8400701	Phospho-p53 Activation	1 x 96
8400702	containing Orange Phospho-p53 Probe	5 x 96

## Thermo Scientific Cellomics Inflammation and Cell Stress Kits

### ATF-2 Activation

The Activating Transcription Factor-2 (ATF-2) Kit responds to the inflammatory cytokines and cellular stressors, including genotoxicity and ischemia/reperfusion. ATF-2 is activated through threonines 69 and 71 by members of the SAPK family. Once activated, ATF-2 forms complexes with Jun family or other ATF family members. These complexes bind to the cAMP Response Element found in the promoters of many genes, stimulating gene transcription.

Product #	Description	Pkg. Size
K01-0010-1	ATF-2 Activation	5 x 96

### Cell Motility

Cell motility is central to a number of biological and pathological processes, including cancer cell invasion and metastasis, inflammation, angiogenesis, wound repair, and embryonic development. Cell movement occurs via the concerted activities of cell adhesion molecules, the actin cytoskeleton and an extensive network of signaling molecules.

Product #	Description	Pkg. Size
K08-0001-1	Cell Motility	5 x 96

## CHOP/GADD153 Detection

Our CHOP/GADD153 Detection Kit is for the direct quantitation of CHOP/GADD153 expression in the nucleus. Expression of mutant proteins disrupts protein folding in the endoplasmic reticulum (ER), causes ER stress and activates a signaling network called the unfolded protein response (UPR). Depending on the capacity of the ER to repair the protein folding process, the UPR either increases or decreases the biosynthetic capacity of the secretory pathway through upregulation of ER chaperone expression or by attenuating the global protein synthesis and increasing pro-apoptotic mechanisms.

Product #	Description	Pkg. Size
8403901	CHOP/GADD153 Detection	1 x 96
8403902		5 x 96

## COX-2 Activation

Our COX-2 Activation Kit is for detecting and measuring cytoplasmic induction of the COX-2 enzyme. This kit contains a monoclonal mouse anti-COX-2 antibody, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence detection of COX-2 for HCS assays.

This assay is primarily for immune cells, specifically macrophages, which are key mediators of the innate immune response and cytokine production. Once stimulated with lipopolysaccharide (LPS) and interferon gamma (IFN $\gamma$ ), or other harmful stimuli, immune cells defensively produce cytokines, prostaglandins, chemokines and reactive amines. Prostaglandins (PGs), produced by the cyclooxygenase (COX) enzymes, are critical in the immune response to induce vasodilation, vasoconstriction, pain and fever.

Product #	Description	Pkg. Size
8403701	COX 2 Activation	1 x 96
8403702		5 x 96

## FOXO1A Activation

Our FOXO1A Activation Kit measures activation of FOXO1A, a transcription factor involved in the initiation of cell arrest and apoptosis. The kit contains a polyclonal rabbit FOXO1A antibody, a goat anti-rabbit secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescent detection of FOXO1A for HCS assays.

Product #	Description	Pkg. Size
8407201	FOXO1A Activation	1 x 96
8407202		5 x 96

## Heme Oxygenase 1 Activation

Our Heme Oxygenase 1 Activation Kit measures activation of heme oxygenase 1 in cells. Heme oxygenase 1 is a microsomal enzyme that catalyzes the oxidation of heme to antioxidants, biliverdin and carbon monoxide and protects cells from wide variety of stress conditions through activation of p38 MAPK. Carbon monoxide produced during oxidation of heme by heme oxygenase 1 activates p38 MAPK, which confers tissue protection through inhibition of cytokine production. Heme oxygenase 1 can be induced by oxidative stress, hypoxia, heat shock, heavy metals and cytokines.

Product #	Description	Pkg. Size
8405801	Heme Oxygenase 1 Activation	1 x 96
8405802		5 x 96

## Heme Oxygenase 1 and Phospho-p38 Activation

Our Heme Oxygenase 1 and Phospho-p38 Activation Kit contains reagents for measuring activation in cells for HCS assays. The kit contains a rabbit polyclonal antibody that detects only phosphorylated p38, a mouse monoclonal antibody for heme oxygenase 1, DyLight-conjugated Secondary Antibodies and various other reagents and buffers required for immunofluorescence detection.

Product #	Description	Pkg. Size
8405901	Heme Oxygenase 1 and Phospho-p38 Activation	1 x 96
8405902		5 x 96

## Hsp27 and Phospho-Hsp27 Detection

Our Hsp27 and Phospho-Hsp27 Detection Kits are for simultaneous quantification of nuclear DNA content, heat shock protein 27 (Hsp27) and phosphorylated Hsp27. These kits allow direct measurements of Hsp27 modulation and Hsp27 phosphorylation using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. The DNA binding dye, DAPI, enables nuclear size and morphology determination and cell cycle phase identification by DNA content. The primary antibodies are specific for their targets and have minimal cross-reactivity. The anti-phospho-Hsp27 antibody detects at Ser78.

Product #	Description	Pkg. Size
8406001	Hsp27 and Phospho-Hsp27 Detection	1 x 96
8406002		5 x 96
8406101	Hsp27 and Phospho-Hsp27 Detection	1 x 96
8406102		5 x 96
8406201	Phospho-Hsp27 Detection	1 x 96
8406202		5 x 96

## Hsp60 and Hsp90-beta Detection

Our Hsp60 and Hsp90b Detection Kits are for simultaneous quantification of nuclear DNA, heat shock protein 60 (Hsp60) and heat shock protein 90b (Hsp90b). Heat shock proteins (HSP) are essential for protein folding, protein synthesis, cellular stress defense and many other functions. Cellular stress increases the HSP levels in cells by transcriptional regulation through HSF-1, STAT1, ATF3 and c Jun. This cellular response is critical for cellular homeostasis. Induction of HSP is closely correlated with substance cytotoxicity and lipophilicity given to the cell.

Product #	Description	Pkg. Size
8406701	Hsp60 and Hsp90β Detection	1 x 96
8406702		5 x 96
8406801	Hsp60 Detection	1 x 96
8406802		5 x 96

## Hsp70 and Hsp90-alpha Detection

Our Hsp70 and Hsp90a Detection Kits are for simultaneous quantification of nuclear DNA content, heat shock protein 70 (Hsp70) and heat shock protein 90α (Hsp90α). These kits allow direct measurements using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. The DNA binding dye, DAPI, enables nuclear size and morphology determination and cell cycle phase identification by DNA content. The primary antibodies are specific for their targets and have minimal cross-reactivity.

Product #	Description	Pkg. Size
8406301	Hsp70 and Hsp90α Detection	1 x 96
8406302		5 x 96
8406401	Hsp70 Detection	1 x 96
8406402		5 x 96
8406501	Hsp90α Detection	1 x 96
8406502		5 x 96

## Immunophilin FKBP52 Detection

Our Immunophilin FKBP52 Detection Kit is for the simultaneous quantification of nuclear DNA content and FK506-binding protein 52 (FKBP52). This kit detects inducible FKBP52 (also known as FKBP4, FKBP59, Hsp56, Hsp59) protein in the cell. FKBP52 is a large immunophilin that binds to the immunosuppressive drug FK506 and has peptidyl-prolyl cis-trans isomerase (PPIase) activity, which is inhibited by the binding of FK506. Immunophilins are enriched in the central and peripheral neurons and reports indicate that FKBP52 has neurotrophic activity.

Product #	Description	Pkg. Size
8406601	Immunophilin FKBP52 Detection	1 x 96
8406602		5 x 96

## iNOS Activation

Our iNOS Activation Kit measures cytoplasmic induction of the iNOS enzyme via activation of one of the many inflammatory pathways.

The kit contains a monoclonal mouse anti-iNOS antibody, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore and the other reagents and buffers required for immunofluorescence labeling of iNOS for HCS assays.

This assay is based on the elicitation of the immune response. After stimulation with lipopolysaccharide (LPS) and interferon gamma (IFNγ), or other harmful stimuli, immune cells produce cytokines, chemokines and oxidative radicals as a defensive mechanism. Nitric oxide synthase (NOS) is responsible for generation of nitric oxide (NO) through oxidizing L-arginine to L-citrulline. Nitric oxide acts as a signaling molecule in the cardiovascular system, as well as an inflammatory molecule, and can react with other species to form more potent radicals such as peroxynitrite and lipid peroxides.

There are three forms of NOS:

- eNOS expressed in endothelial cells
- nNOS, expressed in neuronal cells
- iNOS, expressed in macrophages

Induction of iNOS through inflammatory mediators results in protein nitration, apoptosis induction, oxidative stress, DNA damage and respiration inhibition.

Product #	Description	Pkg. Size
8403801	iNOS Activation	1 x 96
8403802		5 x 96

## MnSOD Induction

Our MnSOD Induction Kit measures induction of manganese superoxide dismutase (MnSOD), an enzyme that reduces cellular oxidative stress via a dismutation reaction of superoxide. The kit contains a polyclonal rabbit MnSOD antibody, a goat anti-rabbit secondary antibody conjugated to DyLight 549 Fluorophore, and other reagents and buffers required for immunofluorescent detection of MnSOD for HCS assays.

Product #	Description	Pkg. Size
8407001	MnSOD Induction	1 x 96
8407002		5 x 96

## MnSOD and Phospho-H2AX Induction

Our MnSOD and Phospho-H2AX Induction Kit measures the production of oxidative DNA damage using manganese superoxide dismutase (MnSOD) and the DNA damage sensor, phospho-histone 2AX. The kit contains a polyclonal rabbit anti-MnSOD antibody, a mouse monoclonal anti-phospho-H2AX antibody, secondary antibodies conjugated to a DyLight Fluorophore and other reagents and buffers required for immunofluorescent detection of MnSOD and phospho-H2AX for HCS assays.

Product #	Description	Pkg. Size
8407301	MnSOD and Phospho-H2AX Induction	1 x 96
8407302		5 x 96

## NFκB Activation

Nuclear factor kappa B (NFκB) transcription factor plays an important role for many physiological processes and responses such as cell proliferation, cell survival, cellular responses to stress and immune response. Normally, NFκB is present in the cytoplasm as a complex with members of the IκB inhibitor family. Both the size of this complex and IκB masking of the nuclear localization sequence on NFκB prevent it from entering the nucleus.

Product #	Description	Pkg. Size
K01-0001-1	NFκB Activation	5 x 96

## NFκB and c-Jun Activation

Our Multiplexed NFκB and c-Jun Activation HCS Reagent Kits are for the simultaneous quantification of NFκB and c-jun activation in the same cell. These kits allow direct measurements of NFκB and phospho-c-jun translocation from the cytoplasm to the nucleus. These kits can be used for a wide range of applications, including cancer, inflammation and diabetes research

Product #	Description	Pkg. Size
8400301	NFκB and c-Jun Activation Kit	1 x 96
8400302	containing Orange NFκB & Green c-Jun Duplex Dyes	5 x 96
8400401	NFκB and c-Jun Activation Kit	1 x 96
8400402	containing Orange NFκB Probe	5 x 96

## NFAT-1 Activation

Nuclear factor of activated T cells (NFAT) is a family of transcription factors implicated in multiple biological processes, including cytokine gene expression, cardiac hypertrophy and adipocyte differentiation. NFAT1 (also known as NFATc2 or NFATp) is a 154 kDa member of this family that is regulated by the calcium-dependent phosphatase calcineurin.

Product #	Description	Pkg. Size
K01-0011-1	NFAT-1 Activation	5 x 96

## Oxidative Stress I

Oxidative Stress is one of the most important cytotoxicity mechanisms investigated using HCS. Our Oxidative Stress I Kit uses a method to quantify chemically induced oxidative stress by measuring the amount of DNA bound to ethidium, a product of dihydroethidium (DHE) oxidation. The method's principle is that reactive oxygen species convert non-fluorescent dihydroethidium to fluorescent ethidium that intercalates into DNA.

Product #	Description	Pkg. Size
8401001	Oxidative Stress I	1 x 96
8401002		5 x 96

## Phospho-AKT Activation

Our Phospho-AKT Activation Kit measures phosphorylation of the 1, 2 and 3 isoforms of AKT, a key kinase involved in regulation of cell proliferation. The kit contains a polyclonal rabbit phospho-AKT antibody, a goat anti-rabbit secondary antibody conjugated to DyLight 649 Fluorophore, Whole Cell Stain Green and other reagents and buffers required for immunofluorescence detection of phospho-AKT for HCS assays.

AKT is activated through the PI3 kinase pathway by growth factors, cytokines, mitogens and hormones. After the signal has been transduced through the membrane by receptor tyrosine kinases, PI3 kinase phosphorylates AKT at Ser473 and Thr308 residues. When phosphorylated, activated AKT phosphorylates key proteins involved in metabolism, protein synthesis, apoptosis, transcription factor regulation and the cell cycle, including MDM2, FOXO, BAD, GSK-3b, and mTOR. Alterations in AKT signaling lead to uncontrolled cell proliferation, and genetic mutations in the PI3 kinase signaling pathway are prominent in colon, breast and prostate cancers.

Product #	Description	Pkg. Size
8404102	Phospho-AKT Activation	5 x 96

## Phospho-4E-BP1 Detection

Our Phospho-4E-BP1 Detection Kit enables quantitation of phosphorylated 4E-BP1 protein (phospho-4E-BP1). Downstream effectors of mTOR-induced translational control include ribosomal protein S6 kinase (S6K) and the eukaryotic initiation factor 4E (eIF4E)-binding protein (4E-BP1). The 4E-BP1 (eIF4E-binding protein 1, also called PHAS-I) is a small heat- and acid-stable phosphoprotein whose phosphorylation is enhanced by growth factors, serum stimulation and insulin in a PI3 kinase-dependent manner. 4E-BP1 undergoes phosphorylation at several sites leading to its release from eIF4E and allowing eIF4E to bind eIF4G and form initiation complexes that facilitate upregulation of protein synthesis.

Product #	Description	Pkg. Size
8405301	Phospho-4E-BP1 Detection	1 x 96
8405302		5 x 96

## Phospho-c-jun and Phospho-JNK Multiplex Detection

Our Phospho-c-jun and Phospho-JNK Detection Kit enables quantitation of phosphorylated c-jun (phospho-c-jun) and phosphorylated Jun N-terminal kinase (phospho-JNK) in the nucleus. Phospho-JNK, also referred to as stress activated protein kinase 1 (SAPK), and phospho-c-jun are measured directly using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. This kit contains an anti-phospho-c-jun primary antibody (mouse monoclonal), anti-phospho-JNK primary antibody (rabbit monoclonal), DyLight Fluor-conjugated Secondary Antibodies and other reagents and buffers required for immunofluorescence staining for HCS assays.

Product #	Description	Pkg. Size
8407901	Phospho-c-jun and Phospho-JNK	1 x 96
8407902	Multiplex Detection	5 x 96

## Phospho-GSK-3 Detection

Our Phospho-GSK-3 Detection Kit measures phosphorylation of the α(Ser21) and β(Ser9) isoforms of glycogen synthase kinase-3 (GSK-3), a kinase involved in glycogen metabolism, translation regulation and Wnt signaling. The kit contains a polyclonal rabbit phospho-GSK-3 antibody, a goat anti-rabbit secondary antibody conjugated to DyLight 649 Fluorophore, Whole Cell Stain Green and various other reagents and buffers required for immunofluorescent detection of phospho-GSK-3 for HCS assays.

Product #	Description	Pkg. Size
8407101	Phospho-GSK-3 Detection	1 x 96
8407102		5 x 96

## Phospho-S6 Detection

Our Phospho-S6 Detection Kit enables quantitation of phosphorylated S6 protein (phospho-S6) of the mammalian 40S ribosomal subunit in the cytoplasm. Phospho-S6 is measured directly using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. This kit contains an anti-phospho-S6 primary antibody (rabbit monoclonal), a goat anti-rabbit secondary antibody conjugated to DyLight 549 Fluorophore and other reagents and buffers required for immunofluorescence staining for HCS assays.

Product #	Description	Pkg. Size
8405201	Phospho-S6 Detection	1 x 96
8405202		5 x 96

## PKA and Phospho-CREB Activation

Our PKA and Phospho-CREB Activation Kit enables simultaneous detection and measurement of activated protein kinase A (PKA) and phosphorylated cAMP response element-binding (CREB) in stimulated cells. After stimulation, PKA is activated and redistributes from the perinuclear region (or perinuclear spots) to diffuse staining in the cytoplasm and nucleus. Once activated, PKA phosphorylates CREB, resulting in translocation of CREB to the nucleus. This assay measures PKA redistribution and CREB phosphorylation.

Product #	Description	Pkg. Size
8404701	PKA and Phospho-CREB Activation	1 x 96

## STAT 1, 2 and 3 Activation

Cytokines play a critical role in the normal development and function of the immune system. Over the past decade, tremendous strides have been made in clarifying how cytokines transmit signals via pathways using the Janus kinase (Jak) protein tyrosine kinases and the signal transducer and activator of transcription (STAT) proteins. STAT regulatory proteins translocate from the cytoplasm to the nucleus and stimulate the transcription of specific genes.

Product #	Description	Pkg. Size
K01-0002-1	STAT 1 Activation	5 x 96
K01-0005-1	STAT 2 Activation	5 x 96
K01-0008-1	STAT 3 Activation	5 x 96

## Thermo Scientific Cellomics Cell Cycle and Cell Proliferation Kits

### BrdU and Ki67 Cell Proliferation

Our BrdU and Ki67 Cell Proliferation Kits are for the simultaneous quantification of DNA content, DNA replication and cell proliferation marker in the same cell. These kits allow direct measurements of DNA content, BrdU incorporation and Ki67 expression.

Product #	Description	Pkg. Size
8401101	BrdU and Ki67 Cell Proliferation –	1 x 96
8401102	Multiplex Kit Containing Green BrdU & Orange Ki67 Probes	5 x 96
8401201	BrdU Cell Proliferation – Singleplex	1 x 96
8401202	Containing Orange BrdU	5 x 96
8401301	Ki67 Cell Proliferation – Singleplex	1 x 96
8401302	Containing Orange Ki67 Probe	5 x 96

### Cell Cycle Kit I

Our HCS Reagent Kit is for the simultaneous analysis of three cell cycle parameters: DNA content, BrdU incorporation and phospho-Histone H3 activation.

Our Cell Cycle Kit I – BrdU and Phospho-Histone H3 Kit is for the simultaneous quantification of nuclear DNA content to distinguish 2N (G1 phase) and 4N (G2/M phase), DNA replication in S phase cells, and mitosis marker in M phase cells. This kit allows direct measurements of BrdU incorporation and mitosis-specific histone H3 phosphorylation using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. The DNA binding dye DAPI is used to determine the cell cycle phases by DNA content. The primary antibodies are specific for their targets and have minimal cross-reactivity with other targets.

Product #	Description	Pkg. Size
8404601	Cell Cycle I	1 x 96
8404602		5 x 96

### Cyclin B1 Activation

The Cyclin B1 Activation Kit enables measurement of intracellular cyclin B1 and its translocation to the nucleus during the different cell cycle phases. The kit contains a monoclonal anti-cyclin B1 mouse primary antibody, a goat anti-mouse secondary antibody conjugated to DyLight 549 Fluorophore, DAPI to identify cell-cycle phase by DNA content and other reagents and buffers required for immunofluorescence staining of cyclin B1 for HCS assays.

Product #	Description	Pkg. Size
8404401	Cyclin B1 Activation	1 x 96
8404402		5 x 96

## Mitosis-Apoptosis Kit

The Multiplex Mitosis-Apoptosis Kit is for the simultaneous quantitation of nuclear DNA content, BrdU incorporation and active caspase 3 and p53 proteins. This kit allows simultaneous measurements of cell proliferation (cell number, DNA replication) and apoptosis using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. DAPI is a DNA-binding dye used to determine the nuclear size and nuclear morphology as well as cell cycle phases by DNA content. The primary antibodies are specific for their targets and have minimal cross-reactivity.

Product #	Description	Pkg. Size
8408201	Multiplex Mitosis-Apoptosis Kit	5 x 96
8408202		50 x 96

## Mitotic Index

Cell division is a regulated process involving complex sub-cellular changes, but two key mitotic events are easily identifiable: microtubule spindle formation and chromosome condensation. Chromosome condensation is initiated in late interphase by post-translational modification of the core histone proteins. Mitotic cells are identified selectively using an antibody specific for a phosphorylated epitope of a core histone protein and a fluorescently labeled secondary antibody.

Product #	Description	Pkg. Size
K05-0001-1	Mitotic Index	5 x 96

## Phospho-mTOR Activation Kit

The Phospho-mTOR Activation Kit measures phosphorylation of mTOR, a kinase involved in the initiation of ribosome biogenesis and translation. The kit contains a monoclonal rabbit anti-phospho-mTOR antibody, a goat anti-rabbit secondary antibody conjugated to DyLight 549 Fluorophore and various other reagents and buffers required for immunofluorescence detection of mTOR for HCS assays.

Product #	Description	Pkg. Size
8408302	Phospho-mTOR Activation	5 x 96
8408303		50 x 96

## Phospho-PLK1 Activation

The Phospho-PLK1 Activation Kit enables measurement of the intracellular phosphorylated polo-like kinase 1 (PLK1) and its correlation with the cell cycle phases. The kit contains a rabbit polyclonal anti-phospho-PLK1 primary antibody, a goat anti-rabbit secondary antibody conjugated to the DyLight 549 Fluorophore, DAPI dye to identify the cell cycle phase by DNA content and other reagents and buffers required for immunofluorescence labeling of cell cycle-specific PLK1 activation for HCS assays. Polo-like kinase 1 (PLK1) is a member of the serine/threonine protein kinase family and cdc5/polo subfamily, and it contains two polo box domains.

Product #	Description	Pkg. Size
8404801	Phospho-PLK1 Activation	1 x 96
8404802		5 x 96

## Phospho-Rb Activation

The Phospho-Rb Activation Kit enables measurement of the nuclear amount of phosphorylated retinoblastoma protein (Rb) in different phases of the cell cycle. The kit contains a mouse monoclonal anti-phospho-Rb primary antibody specific for Rb phosphorylated at Ser608, a goat anti-mouse secondary antibody conjugated to the DyLight 549 Fluorophore, DAPI dye to identify the cell cycle phase by DNA content and other reagents and buffers required for immunofluorescence labeling of cell cycle specific Rb phosphorylation for HCS assays.

Product #	Description	Pkg. Size
8404501	Phospho-Rb Activation	1 x 96
8404502		5 x 96

## Thermo Scientific Cellomics Cell Morphology and Phenotypic Change Kits

### Cytoskeletal Rearrangement

Our Cytoskeletal Rearrangement HCS Reagent Kits are for the simultaneous quantitation of DNA content, cell morphology and the intracellular arrangement of microfilaments and microtubules in the same cell. These kits allow direct measurements of cell and nuclear morphology, F-actin, and microtubule changes using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates.

The primary antibody is specific for its target and has minimal cross-reactivity with other targets. The intracellular meshwork of the cytoskeleton is responsible for maintaining cell shape, cell movement, cytokinesis and organelle organization. The cytoskeleton network also facilitates proper function of other proteins by direct binding, transporting, repositioning and sequestering these proteins. The structure of cytoskeleton is controlled by cytoskeleton-associated proteins in response to the external signaling. Therefore, defects in the ability to regulate the dynamics of cytoskeletal structure are likely to cause detrimental effects on other cell function.

Product #	Description	Pkg. Size
8402401	Cytoskeletal Rearrangement –	1 x 96
8402402	Whole Cell Stain, F-actin and Tubulin	5 x 96
8402501	Cytoskeletal Rearrangement –	1 x 96
8402502	Whole Cell Stain and F-actin	5 x 96
8402601	Cytoskeletal Rearrangement –	1 x 96
8402602	Whole Cell Stain and Tubulin	5 x 96

### Neurite Outgrowth

Efforts in CNS drug discovery research are focused on the identification of compounds that affect the growth of neurites. Drugs that promote nerve growth have potential curative effect in a wide variety of diseases and traumas that result in neuropathy and nerve injury, including stroke, spinal cord injuries and neurodegenerative illnesses such as Parkinson's and Alzheimer's disease.

Product #	Description	Pkg. Size
K07-0001-1	Neurite Outgrowth	5 x 96

### Synaptogenesis Kit

The Synaptogenesis Kit enables simultaneous detection of neuronal population, neurite, pre-synaptic vesicle, post-synaptic puncta and synapse using a fixed end-point assay based on immunofluorescence detection in cells grown on standard high-density microplates. The molecular network between synapses controls synaptic signal transmission and plasticity and regulates neuronal growth, differentiation and death. To understand the relationship between synaptic activity and neuropathophysiology and the molecular mechanism involved in synaptogenesis and synapse regulation, the microstructure of synaptic junctions has been extensively studied. The modulation of neurite and synaptic structures in neurons are closely related to the pathological process of neurological diseases or in neurodevelopment.

This kit has been optimized with the ArrayScan® HCS Reader using the Neuronal Profiling BioApplication Software Module, which identifies the synapse measured by colocalization of the pre-synaptic marker with the post-synaptic marker. Thus, automated plate-handling, focusing, cell image acquisition/processing, and data analysis/management are combined in one HCA system to assay for test compounds. In addition to HCS instruments, cells labeled by the kit reagents can be viewed and analyzed by other fluorescence microscopes.

Product #	Description	Pkg. Size
8408402	Synaptogenesis Kit	5 x 96
8408403		50 x 96

## Thermo Scientific Cellomics Accessory Reagents

### HCS Reagent Toolbox

Our HCS Reagent Kits enable fluorescent detection of any rabbit or mouse primary antibody, together with stains, to characterize nuclear and whole cell morphology.

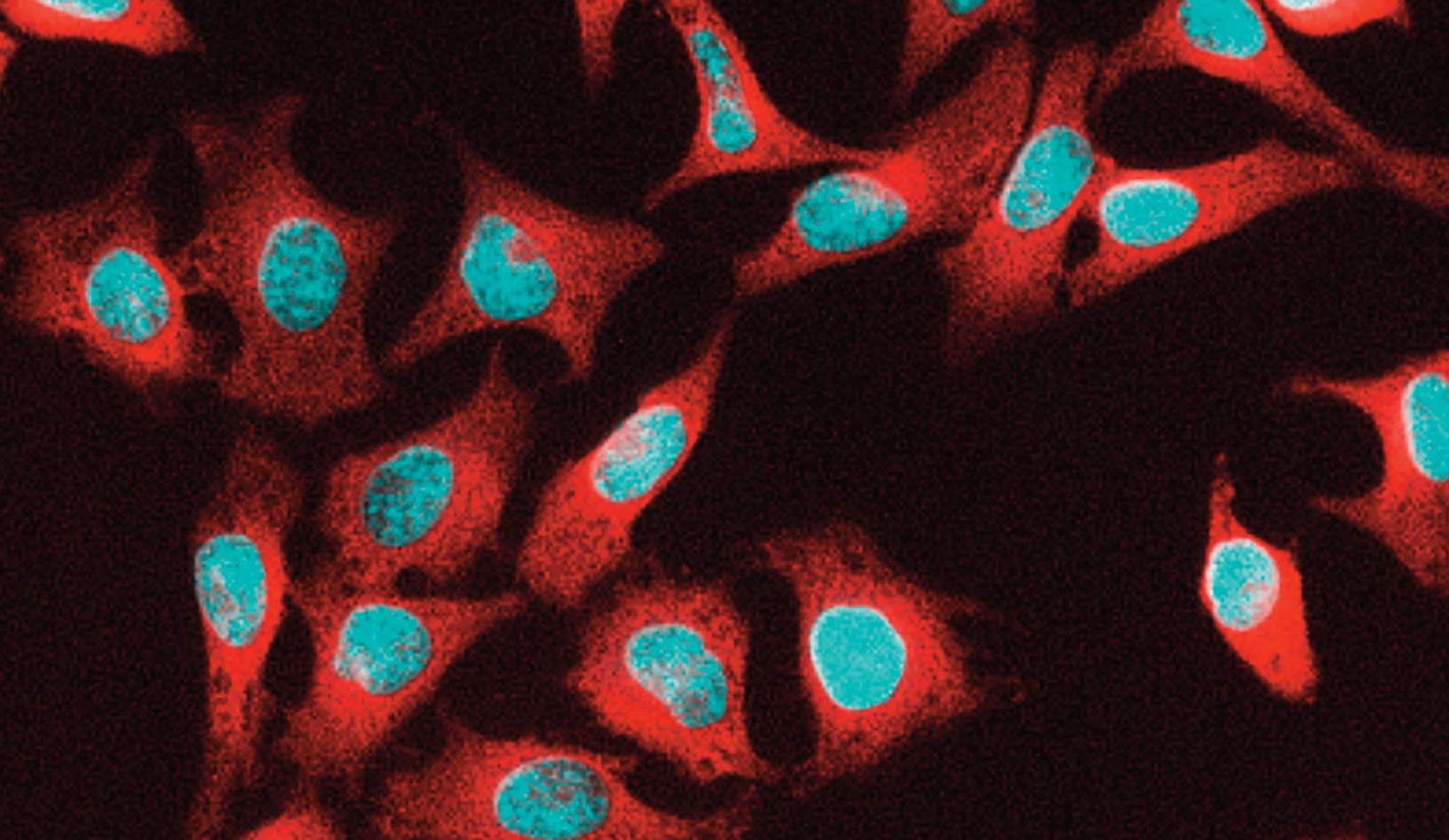
Our Toolbox Kits consist of essential cell staining reagents validated and optimized for HCS assays. Toolbox Kits contain Whole Cell Stain (WCS) Green and Hoechst Dye (for nuclear staining), as well as other reagents and buffers necessary for immunofluorescence labeling and detection. The Rabbit and Mouse Antibody Detection WCS Toolbox Kits also contain a secondary antibody for detecting target-specific antibodies and are formatted for use with any mouse or rabbit antibody specific for the target of interest. Cells stained using these kits also can be imaged using fluorescence or confocal microscopy. These kits provide the critical reagents and protocol necessary to simultaneously detect two or three staining parameters associated with most HCS applications.

Product #	Description	Pkg. Size
8404901	Whole Cell Stain Toolbox	1 x 96
8404902		5 x 96
8405001	Rabbit Antibody Detection WCS Toolbox	1 x 96
8405002		5 x 96
8405101	Mouse Antibody Detection WCS Toolbox	1 x 96
8405102		5 x 96

### Whole Cell Stains

Our Whole Cell Stains provide excellent staining for HCS assays and fluorescence microscopy. These stains are intense, highly photostable and match the output wavelengths of common fluorescence instrumentation. Effective image analysis in HCS cell-based assays and fluorescence microscopy requires fluorescent labeling of the entire cell. In these assays, the cellular primary object is used to identify and count individual cells and define the cell region in which the image analysis is applied. The primary object might be a major cellular component, such as the nucleus, a large organelle or the whole cell. When the whole cell is the primary object, high-quality Cellomics Whole Cell Stains effectively distinguish intact cells from bordering cells.

Product #	Description	Pkg. Size
8403501	Whole Cell Stain Blue	1 x 96
8403502		5 x 96
8403201	Whole Cell Stain Green	1 x 96
8403202		5 x 96
8403301	Whole Cell Stain Orange	1 x 96
8403302		5 x 96
8403401	Whole Cell Stain Red	1 x 96
8403402		5 x 96



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