

Fluorescent Probes

Achieve the versatility, sensitivity, and quantitative capabilities you need in your research with Cayman's diverse library of more than 200 fluorescent probes. We offer a range of probes to detect intracellular events, protein interactions, a host of enzyme substrates, and many other significant targets. Use this at-a-glance guide to select the most appropriate fluorochromes for your experiment.

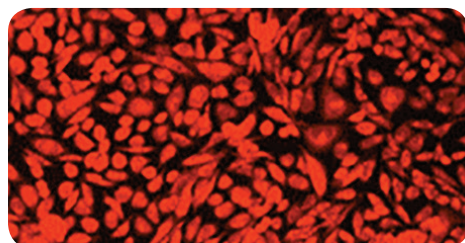


Cell Viability, Cell Cycle, Cell Proliferation

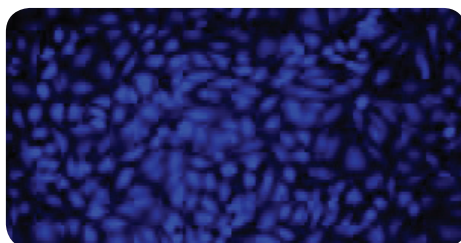
Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
14338	Acridine Orange	cell cycle phase; pH (cell permeable)	<ul style="list-style-type: none"> ■ 502 (dsDNA) ■ 460 (ssDNA and RNA) ■ 475 (low pH) 	<ul style="list-style-type: none"> ■ 525 (dsDNA) ■ 650 (ssDNA and RNA) ■ 590 (low pH)
11397	7-Aminoactinomycin D	DNA; cell viability	■ ■ ■ 488, 546, 578	■ 650
14948	Calcein AM*	cell viability (cell permeable)	■ 494	■ 517
20635	Calcein Deep Red™ Acetate*	cell viability (cell permeable)	■ 646	■ 659
20641	Calcein Orange™ Diacetate*	cell viability (cell permeable)	■ 525	■ 550
20632	Calcein Red™ AM*	cell viability (cell permeable)	■ 560	■ 574
20639	Calcein UltraBlue™ AM*	cell viability (cell permeable) <i>(higher photostability and stronger fluorescence intensity at physiological pH than Calcein Blue)</i>	■ 360	■ 445
14456	CFDA-SE	cell proliferation	■ 492	■ 517
20695	CytoCalcein™ Violet 500	cell viability (cell permeable)	■ 405	■ 500
20698	CytoTrace™ Red CMTPX	cell division; cell trafficking; cell-to-cell interactions (cell permeable)	■ 577	■ 602
19583	Green CMFDA	cell division; cell trafficking (cell permeable)	■ 492	■ 517
15547	Hoechst 33342 (hydrochloride)	DNA (A-T-rich sequences); cell cycle; nuclear morphology (cell permeable)	■ 350	■ 461
15003	JC-1	mitochondrial integrity; apoptosis (cell permeable)	<ul style="list-style-type: none"> ■ 485 (monomer) ■ - ■ 520-570 (aggregate) 	<ul style="list-style-type: none"> ■ 535 (monomer) ■ 570-610 (aggregate)
14289	Propidium Iodide	DNA; RNA; cell viability	■ 488-535	■ 617
14488	Pyronin Y	dsRNA; cell cycle (cell permeable)	■ - ■ 540-550	■ - ■ 560-580
14322	Resazurin (sodium salt)	enzyme activity; cell viability (cell permeable)	■ 530-540	■ 585-595
21686	Resorufin Acetate	cytosolic ALDH esterase and chymotrypsin activity (cell permeable)	■ 571	■ 585

*Also available: membrane-impermeable non-AM forms

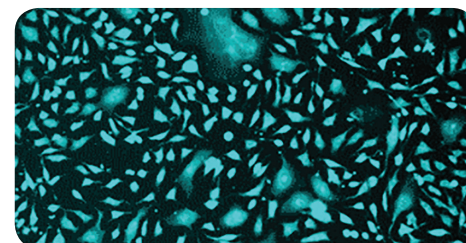
View a complete list of cell health fluorescent probes online at www.caymanchem.com



CPA cells stained with Calcein Orange™ Diacetate



Live HeLa cells stained in medium with Calcein UltraBlue™ AM



CPA cells stained with CytoCalcein™ Violet 500

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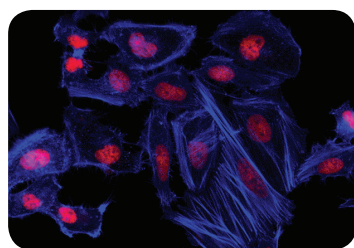
Protease Substrates

Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
14459	Ac-DEVD-AFC	caspase-3 activity	400	505
17051	Ac-LEHD-AFC	caspase-4, -5, and -9 activity	400	505
14991	Ac-LETD-AFC	caspase-8 activity	400	505
14989	Ac-VEID-AMC	caspase-6 and -8 activity	340-360	440-460
14992	Ac-WEHD-AFC	caspase-1, -4, and -5 activity	400	505
17591	Ac-YVAD-AFC	caspase-1 and -4 activity	400	505
14907	MeOSuc-Ala-Ala-Pro-Val-AMC	human leukocyte and porcine pancreatic elastase activity	355-380	440-460
11675	(Z-Ala-Ala-Ala-Ala)2Rh110	elastase activity	485	525
10008118	Z-LLL-AMC	proteasomal chymotrypsin-like activity	340-360	440-460

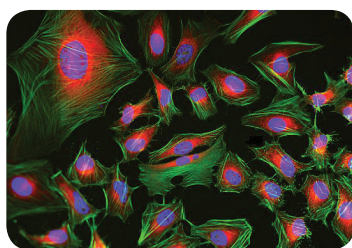
View a complete list of protease activity fluorescent probes online at www.caymanchem.com

Cytoskeletal Proteins

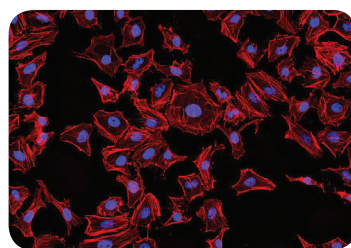
Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
21016	9-(2,2-Dicyanovinyl)julolidine	tubulin and other cytoskeletal proteins	450	480 (low viscosity solvents) 505 (high viscosity solvents)
20463	Phalloidin-AMCA Conjugate	F-actin	350	450
20546	Phalloidin-California Red Conjugate	F-actin	583	605
20478	Phalloidin-Fluorescein Conjugate	F-actin	492	518
20547	Phalloidin-iFluor™ 350 Conjugate	F-actin	353	442
20549	Phalloidin-iFluor™ 488 Conjugate	F-actin	493	517
20550	Phalloidin-iFluor™ 514 Conjugate	F-actin	520	547
20552	Phalloidin-iFluor™ 555 Conjugate	F-actin	556	574
20553	Phalloidin-iFluor™ 594 Conjugate	F-actin	590	618
20555	Phalloidin-iFluor™ 647 Conjugate	F-actin	650	665
20545	Phalloidin-Tetramethylrhodamine Conjugate	F-actin	546	575



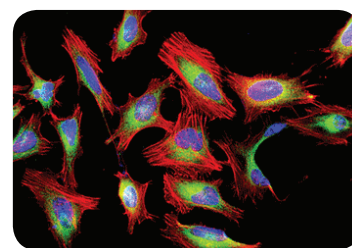
Actin filaments stained with Phalloidin-iFluor™ 350 Conjugate



HeLa cells stained with Phalloidin-iFluor™ 488 Conjugate



HeLa cells stained with Phalloidin-iFluor™ 514 Conjugate



HeLa cells labeled with Phalloidin-iFluor™ 594 Conjugate

pH

Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
17183	BCECF	pH	440 / 490	535
15922	BCECF AM	intracellular pH (cell permeable)	440 / 490	535
17409	3,6-diacetoxy Phthalonitrile	intracellular pH (cell permeable)	351	450-476 (pH 5.0-10.0)

Calcium

Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
20424	BTC AM*	intracellular calcium (low affinity) (cell permeable)	■ / ■ 401 (Ca ²⁺ -bound) / 480	■ 529
20400	Cal Green™ 1 AM*	intracellular calcium (cell permeable)	■ 506	■ 531
14960	Fluo-3 AM*	intracellular calcium (cell permeable)	■ 488	■ 526
14591	Fura-2 AM*	intracellular calcium (cell permeable)	■ 362 (low [Ca ²⁺]) ■ 335 (high [Ca ²⁺])	■ 512 (low [Ca ²⁺]) ■ 505 (high [Ca ²⁺])
20416	Fura-FF AM*	intracellular calcium (low affinity) (cell permeable)	■ 365 (no Ca ²⁺) ■ 339 (high [Ca ²⁺])	■ 514 (no Ca ²⁺) ■ 507 (high [Ca ²⁺])
15366	Fura-PE3 AM*	intracellular calcium (leak resistant) (cell permeable)	■ 364 (no Ca ²⁺) ■ 335 (Ca ²⁺ -bound)	■ 508 (no Ca ²⁺) ■ 495 (Ca ²⁺ -bound)
20417	Indo-1 AM*	intracellular calcium (cell permeable)	■ 349-364	■ ■ 475-485 (no Ca ²⁺) ■ 400-410 (Ca ²⁺ -bound)
20422	Quin-2 AM*	intracellular calcium (high affinity) (cell permeable)	■ 339	■ 492
20442	Rhod-5N AM*	intracellular calcium (low affinity) (cell permeable)	■ 551	■ 576
20444	Rhod-FF AM*	intracellular calcium (low affinity)	■ 552	■ 580

*Also available: membrane-impermeable non-AM forms

View a complete list of calcium fluorescent probes online at www.caymanchem.com

Protein Interactions

Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
20672	3-BODIPY-propanoylaminocaproic Acid N-hydroxysuccinimide ester	proteins immobilized on PVDF membranes	■ 300-360	■ 511
20704	FIAsH-EDT ₂	proteins with a tetracysteine sequence	■ 508	■ 528
19767	ReAsH-EDT ₂	proteins with a tetracysteine sequence	■ 593	■ 608

View a complete list of probes to detect protein interactions online at www.caymanchem.com

Enzyme Substrates

Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
62910	7-hydroxycoumarinyl Arachidonate	cPLA ₂ activity	■ 335	■ 450
16551	4-Methylumbelliferyl- α -D-Galactopyranoside	α -galactosidase activity	■ 330 (pH 4.6); 370 (pH 7.4); ■ 385 (pH 10.4)	■ 445-454
20948	4-Methylumbelliferyl- β -D-Glucopyranoside	β -glucosidase and β -glucocerebrosidase activity	■ 330 (pH 4.6); 370 (pH 7.4); ■ 385 (pH 10.4)	■ 445-454
9001600	4-Methylumbelliferyl- α -L-Iduronide 2-sulfate (sodium salt)	α -L-iduronidase and iduronate-2-sulfatase activity	■ 330 (pH 4.6); 370 (pH 7.4); ■ 385 (pH 10.4)	■ 445-454
19590	4-Methylumbelliferyl Oleate	acid and alkaline lipase activity	■ 330 (pH 4.6); 370 (pH 7.4); ■ 385 (pH 10.4)	■ 445-454
16645	4-Methylumbelliferyl Phosphate	phosphatase activity	■ 330 (pH 4.6); 370 (pH 7.4); ■ 385 (pH 10.4)	■ 445-454
62245	10-Pyrene-PC	phospholipase activity	■ 345	■ 395

View a complete list of enzyme substrate fluorescent probes online at www.caymanchem.com

ROS, RNS, Oxidative Damage

Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
14051	Coumarin Boronic Acid	peroxynitrite, hypochlorous, and hydrogen peroxide formation (cell permeable)	■ 332	■ >400
19111	Coumarin hydrazine	reactive carbonyl groups (cell permeable)	■ 365	■ - ■ 430-550
85165	DAF-2 diacetate	nitric oxide (cell permeable)	■ 485	■ 538
18767	DAF-FM diacetate	nitric oxide (cell permeable)	■ 495	■ 515
85070	DAN-1 EE (hydrochloride)	nitric oxide (cell permeable)	■ 360-380	■ 420-450
85155	2,7-Dichlorodihydrofluorescein diacetate	peroxynitrite formation (cell permeable)	■ 502	■ 523
12013	Dihydroethidium	superoxide (cell permeable)	■ 490	■ 590
85100	Dihydrorhodamine 123	peroxynitrite (cell permeable)	■ 500	■ 536
62237	DPPP	hydroperoxides; low-density lipoprotein; cellular oxidation (cell permeable)	■ 351	■ 380
14606	FBBBE	intracellular hydrogen peroxide (cell permeable)	■ 480	■ 512
14872	Lucigenin	superoxide; chloride (cell permeable)	■ 455	■ 505
16803	Luminol	peroxidation; iron; gold; cyanide (cell permeable)	■ 355	■ 411
17097	Monobromobimane	reactive sulfur; thiol groups (cell permeable)	■ 398	■ 490
10005983	Pentafluorobenzenesulfonyl fluorescein	fluorescein hydrogen peroxide (cell permeable)	■ - ■ 465-505	■ - ■ 505-555
13083	ThioFluor 623	thiols (cell permeable)	■ 563	■ 623

View a complete list of ROS, RNS, and oxidative damage fluorescent probes online at www.caymanchem.com

RNA, DNA, Nucleic Acids

Item No.	Product Name	Detects	Excitation Maximum (nm)	Emission Maximum (nm)
11315	Chromomycin A ₃	DNA (two or more contiguous GC base pairs)	■ 445	■ 575
14285	DAPI (hydrochloride)	DNA (A-T-rich sequences)	■ 358	■ 461
17567	N-(2-hydroxyethyl)-Naphthalimide	nucleic acids and their precursors	■ 330-333	■ 366-378
22439	9-Amino-6-chloro-2-methoxyacridine	DNA and pH gradients; poly(dA-dT) sequences of DNA (cell permeable)	■ 411	■ 475
21227	1,N ⁶ -Ethenoadenosine 5'-monophosphate (sodium salt)	5'-nucleotidase activity	■ 250-300	
10671	coumarin-SAHA	HDACs	■ 325	■ 400

View a complete list of RNA, DNA, and nucleic acid fluorescent probes online at www.caymanchem.com

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