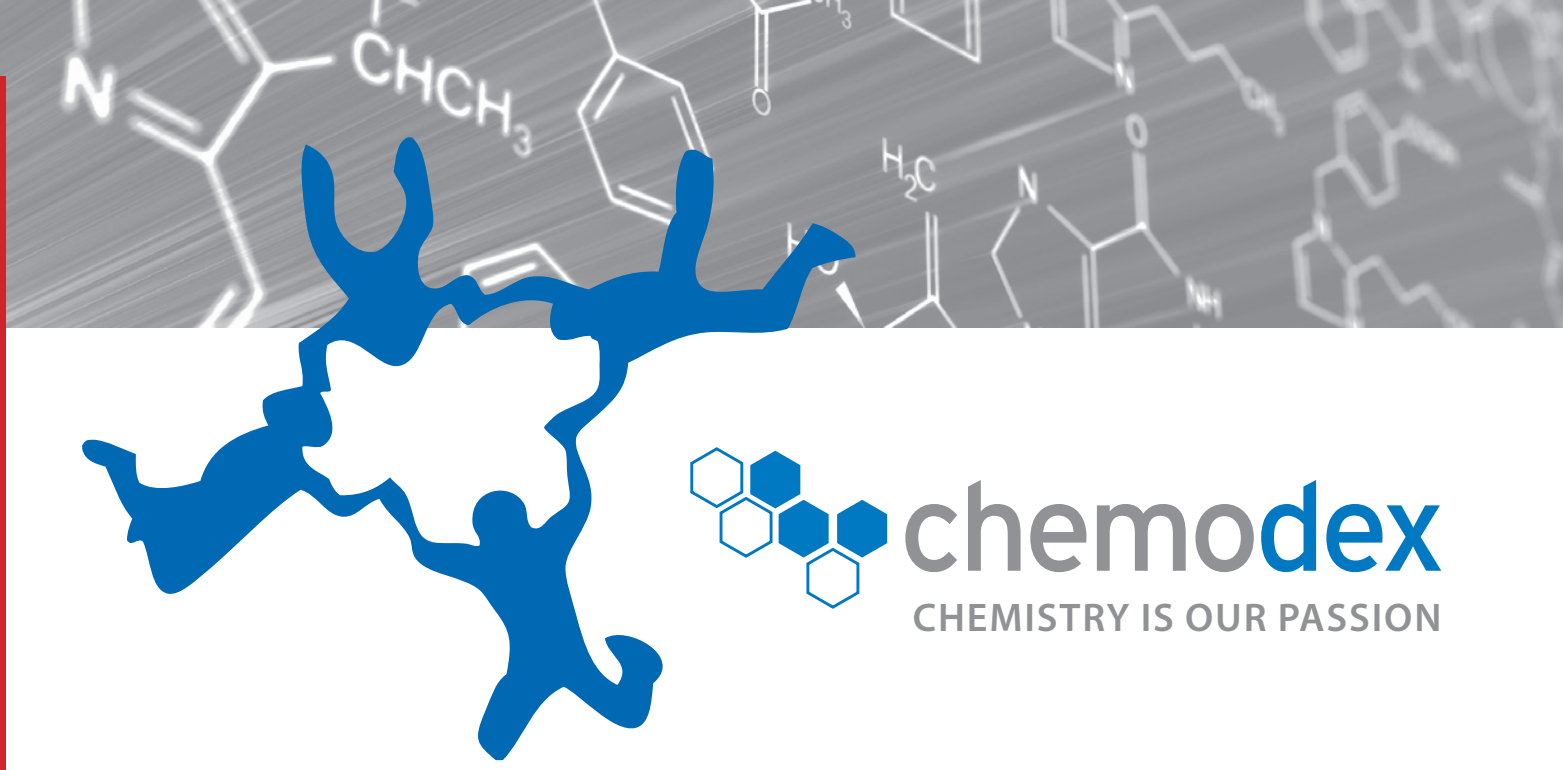


chemodex

CHEMISTRY IS OUR PASSION

MANUFACTURER OF

Fluorescent Reagents & Fine Chemicals

Chemodex is a Swiss company manufacturing an attractive product portfolio at very competitive prices. Chemodex is an expert in the synthesis of fluorescent substances derived from fluorophores such as coumarin, fluorescein, rhodamine and pyrene. The reagents are used by life science researchers as probes, stains, markers, NIR labels, pH-sensors, ion indicators, chelators and in other applications (e.g. analytical biochemistry, immunoassays and microscopy) in academia, biotechnology and in the diagnostics & pharmaceutical industry.

Adipogen Life Sciences collaborates closely with Chemodex and is distributing their products worldwide. Please contact us for further information (incl. BULK quotations) at **info@adipogen.com.**

> 1000 Products

SWISS QUALITY REAGENTS

曜鴻生物科技有限公司
Yao-Hong Biotechnology Inc.
02-2668 6845
yaohong@yh-bio.com.tw

Cellular Sensors, Ion and pH Indicators

The maintenance of inorganic cation and anion concentrations is a feature of live cells. Homeostatic regulation of these ionic gradients is critical for most cellular functions. Measuring ionic concentrations with both spatial and temporal resolution has become critical in research, ranging from drug discovery to studies of neuronal function. Fluorescent probes, which allow visualization of cations (e.g. Ca^{2+}, Zn^{2+}, Mg^{2+}), anions (e.g. Cl^-, Phosphate), pH shifts, membrane potentials or enzymatic activity in live cells by fluorescence microscopy, are useful tools for studying biological systems.

Zinc Probes

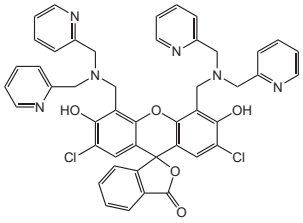
Zinc (Zn^{2+}) is the second most abundant transition metal in living organisms after iron. Mounting evidence indicates that zinc has multiple roles in cell biology, as a part of metalloenzyme catalytic sites, as a structural component of gene regulatory proteins and as a free signal ion, particularly in the cortex of the brain. It is of particular importance in the regulation of gene expression, as Zn^{2+}-binding proteins account for nearly 50% of the transcription regulatory proteins in the human genome. In addition to protein-bound Zn^{2+}, free or loosely bound Zn^{2+} exists at high concentration especially in brain and both can be visualized by Zinc probes (e.g. Zinpyr-1 or ZnAFs).

Zinpyr-1

CDX-Z0001 — 20 mg | 125 mg

Membrane permeable fluorescein-based probe suitable for the fluorometric detection of Zn^{2+}.

Spectral Data:
λex 492 nm; λem 527 nm.



PRODUCT NAME	PID	SIZES
TPEN	CDX-T0044	100 mg | 1 g
Zinquin ethyl ester	CDX-Z0013	1 mg | 5 mg | 50 mg
Zinquin (free acid)	CDX-Z0014	1 mg | 5 mg | 25 mg
Zin3 AM	CDX-F0019	100 µg | 500 µg | 1 mg
ZnAF-1	CDX-Z0005	5 mg | 125 mg
ZnAF-1 Solution	CDX-Z0505	1 mg

PRODUCT NAME	PID	SIZES
ZnAF-2	CDX-Z0006	1 mg | 5 mg | 25 mg
ZnAF-2 Solution	CDX-Z0506	1 mg
ZnAF-1 DA	CDX-Z0007	1 mg | 5 mg | 25 mg
ZnAF-1 DA Solution	CDX-Z0507	1 mg
ZnAF-2 DA	CDX-Z0008	1 mg | 5 mg
ZnAF-2 DA Solution	CDX-Z0508	1 mg

Other Cation & Anion Probes

PRODUCT NAME	PID	DESCRIPTION
AGD	CDX-D0169	Highly selective Fe^{2+} fluorescent probe.
Aluminon	CDX-A0293	Dye used to detect aluminium ion in aqueous solutions.
BHHT	CDX-B0146	Chelating label for europium (Eu^{3+}). Builds luminescent complexes.
BTBCT	CDX-B0062	Suitable for the fluorometric detection of Eu^{3+}.
Carbonate ionophore VII	CDX-C0131	Ionophore for monitoring $HCO3^-$, used inion-selective electrodes (ISE).
Copper(II) ionophore IV	CDX-C0130	Ionophore for monitoring Cu^{2+}, used inion-selective electrodes (ISE).
Ferrozine Na hydrate	CDX-F0059	Fe^{2+} chelating agent commonly used as a colorimetric reagent.
Litihium Ionophore III	CDX-L0123	Neutral non-cyclic Li^+-selective ionophore.
MQAE	CDX-E0001	Quinolinium-based fluorescent chloride indicator. More sensitive than SPQ.
Nitrate Ionophore VI	CDX-H0054	Ionophore for monitoring nitrate.
PBFI-AM	CDX-P0068	Cell-permeable, potassium-sensitive fluorophore.
SPQ	CDX-M0051	Quinolinium-based fluorescent chloride indicator.
Xylidyl blue I	CDX-X0009	Colorimetric reagent for Mg detection.

Visit www.adipogen.com for a complete list of Zinc Probes.

Cellular Sensors, Ion and pH Indicators

Calcium Indicators & Chelators

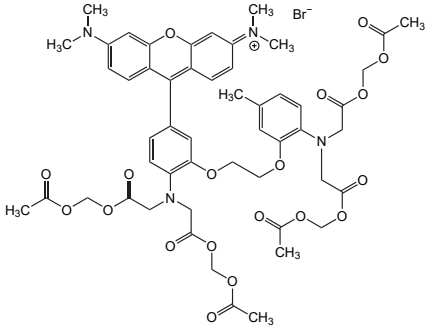
Calcium (Ca^{2+}) acts as a universal second messenger in nearly every aspect of cellular life. Ca^{2+}-mediated signal transduction has specific roles in exocytosis, motility, apoptosis and transcription. Numerous functions of all types of cells are regulated by Ca^{2+}, thus its measurement is critical for various biological investigations. Ca^{2+} indicators and chelators are fluorescent probes that show spectral responses upon binding Ca^{2+}. They have enabled researchers to investigate changes in intracellular and extracellular Ca^{2+} concentrations by using fluorescence microscopy, flow cytometry, fluorescence spectroscopy and fluorescence microplate readers.

Rhod-2-AM

CDX-A0072 1 mg

Long-wavelength cell-permeant Ca^{2+} indicator allowing non-invasive measurement of calcium ions in live cells. Valuable alternative in cells and tissues that have high levels of auto-fluorescence. Rhod-2 has the longest fluorescent emission signal of the commonly used calcium indicators. It contains a rhodamine-like fluorophore, whose excitation and emission maxima make it suitable for use with argon and krypton laser.

Spectral Properties: λex 550 nm, λem 578 nm in methanol.



PRODUCT NAME	PID	DESCRIPTION
BAPTA-AM	CDX-B0285	Membrane permeable highly selective calcium chelator.
Fluo-3 AM	CDX-F0033	Visible light-excitable calcium indicator.
FURA 2-AM	CDX-F0014	Membrane-permeable calcium chelator.
Indo 1-AM	CDX-I0019	Cell-permeable non-invasive UV-excitable calcium indicator.

pH Indicators / Probes

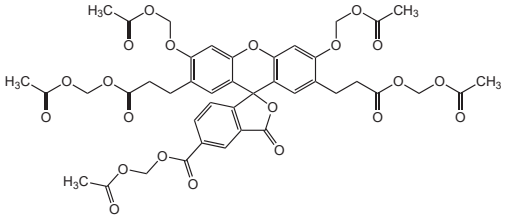
Intracellular pH is generally between ~6.8 and 7.4 in the cytosol and ~4.5 and 6.0 in acidic organelles such as lysosomes. Unlike intracellular free Ca^{2+} concentrations, which can rapidly change by perhaps 100-fold, pH inside a cell varies by only fractions of a pH unit and such changes may occur quite slowly. Fluorescent dyes provide the increased sensitivity required for optical pH measurements inside live cells and to sense pH changes within physiological ranges. Chemodex offers a range of indicators for tracking intracellular pH in the cytosol or in particular organelles.

BCECF-AM

CDX-C0003 1 mg | 5 mg

BCECF-AM is a widely-used fluorescent indicator for measuring intracellular pH. This ester can also be used to investigate intracellular changes in other ions, including potassium.

Spectral Properties: λex 490 nm; λem 535 nm.



PRODUCT NAME	PID	DESCRIPTION
Fluorescein octadecyl ester	CDX-F0074	Lipophilic fluorescent pH indicator.
HPTS	CDX-H0034	Fluorescent pH indicator for physiological range.
Neutral Red 5	CDX-N0249	Cellular pH indicator for histology stainings, changing from **Red** to **Yellow** between pH 6.8 and 8.0.
Phenol red sodium salt	CDX-P0026	Water soluble pH indicator used in the 6.8 (**Yellow**) to 8.2 (**Red**) range.
Xylenol Blue	CDX-X0006	Acid-base pH indicator dye with pH ranges of pH 1.2 (**Red**) – pH 2.8 (**Yellow**), and pH 8.0 (**Yellow**) – pH 9.6 (**Blue**).

Visit www.adipogen.com for a complete list of Calcium and pH Probes.

Cellular Sensors, Ion and pH Indicators

Membrane Potential Sensors

Membrane potential is the difference in voltage between the interior and exterior of a cell. Increases and decreases in membrane potential play a central role in many physiological processes, including nerve-impulse propagation, muscle contraction and cell signaling. Potentiometric probes are important tools for studying these processes and are generally characterized as slow- or fast-response probes. Molecules that change their structure in response to the surrounding electric field can function as fast-response probes for the detection of transient potential changes. Slow-response dyes function by entering depolarized cells and binding to proteins or membranes. Important for cell biology research are specific probes for mitochondrial membrane potential measurement.

Slow Response Membrane Potential Probes

PRODUCT NAME	PID	SIZES
DiI	CDX-D0230	100 mg | 1 g
$DiOC_2(3)$	CDX-D0180	1 g
$DiSC_2(3)$	CDX-D0447	250 mg |1 g
$DiSC_3(3)$	CDX-D0007	250 mg | 500 mg
$DiSC_3(5)$	CDX-D0130	100 mg | 1 g
Oxonol V	CDX-P0019	50 mg | 500 mg

Potential-indepenent Probes for Labeling/ Staining Plasma Membranes

PRODUCT NAME	PID	SIZES
N-Octadecanoyl-Nile Blue	CDX-O0027	10 mg | 20 mg 100 mg
NBD-X	CDX-N0005	200 mg | 1 g
Laurdan	CDX-D0098	50 mg | 250 mg | 1 g
5-Dodecanoylamino-fluorescein	CDX-D0162	50 mg | 250 mg
Merocyanin 540	CDX-M0033	100 mg | 500 mg | 5 g

JC-1 and JC-10 – Mitochondrial Membrane Potential Probes

The membrane-permeant dual-emission potential-sensitive JC-1 dye is widely used in apoptosis studies to monitor mitochondrial health by flow cytometry, fluorescence microscopy and in microplate-based fluorescent assays. JC-1 dye can be used as an indicator of mitochondrial membrane potential in a variety of cell types, including myocytes and neurons, as well as in intact tissues and isolated mitochondria. JC-1 accumulates in mitochondria, selectively generating an **orange** J-aggregate emission profile (590 nm) in healthy cells. After cell injury, as membrane potential decreases, JC-1 monomers are generated, resulting in a shift to **green** emission (529 nm). JC-10 is superior analog of JC-1.

PRODUCT NAME	PID	SIZES
JC-1	AG-CR1-3568	1 mg | 5 x 1 mg | 5 mg
JC-10 (high purity)	AG-CR1-3600	1 mg | 5 mg

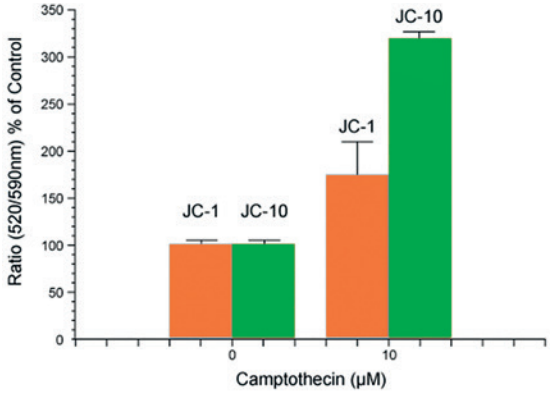


FIGURE: JC-10 and JC-1 comparison for monitoring campotothecin-induced mitochondria membrane potential changes in Jurkat cells.

Other Mitochondrial Membrane Probes

PRODUCT NAME	PID	SIZES
10-Dodecylacridine Orange Bromide	CDX-D0120	250 mg | 1 g
Rhodamine 6G	CDX-R0032	25 g | 100 g
Rhodamine B octadecyl ester perchlorate	CDX-O0022	20 mg | 100 mg

Visit www.adipogen.com for a complete list of Membrane Probes.

Reactive Oxygen Species (ROS) Detection

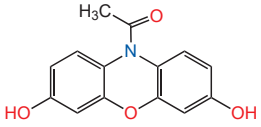
Reactive oxygen species (ROS) are chemically reactive compounds containing oxygen. The sequential reduction of oxygen through the addition of electrons leads to the formation of a number of ROS including hydrogen peroxide (H_2O_2), hydroxyl radical ($^{\cdot}OH$), tert-butyl-hydroperoxide (TBHP), hypochlorous acid (HOCl), superoxide anion ($O_2^{\cdot-}$), nitric oxide ($NO^{\cdot}$) and peroxynitrite anion (ONOO). ROS are produced during a number of physiological and pathological processes. Many diseases are caused by excessive ROS as a result of an imbalance between radical-generating and radical-scavenging systems, a condition called oxidative stress.

H_2O_2, O_2 and other ROS Probes

10-Acetyl-3,7-dihydroxyphenoxazine [Amplex Red]

CDX-A0022 25 mg | 200 mg

Amplex Red is a non-fluorescent, highly sensitive and stable probe for H_2O_2. Amplex Red is a fluorogenic substrate for peroxidase. In the presence of horseradish peroxidase (HRP), the Amplex Red reagent reacts in a 1:1 stoichiometry with H_2O_2 to produce highly fluorescent resorufin. Because H_2O_2 is produced in many different enzymatic reactions, the Amplex Red reagent allows researchers to detect the activity of many different enzymes.



PRODUCT NAME	PID	DESCRIPTION
meso-Tetraphenyl-tetrabenzo-porphine palladium complex	CDX-T0083	Phosphorescent probe for measuring oxygen in very low concentrations and luminescent marker for oxygen and pH in biomedical imaging.
Lucigenin	CDX-D0068	Chemiluminescent probe for the detection of peroxides in biological systems, specific for superoxide anion radicals.
Dihydrorhodamine 123	CDX-D0134	Cell-permeable non-fluorescent reactive oxygen species (ROS) indicator.
o-Dianisidine	CDX-D1023	Peroxidase substrate used as a redox indicator dye.

H_2S and H_2S_2 Probes

PRODUCT NAME	PID	DESCRIPTION
DSP-1	CDX-D0391	Fluorescent probe for detection of H_2S_2 and hydrogen polysulfides.
DSP-3	CDX-D0393	Cell-permeable fluorescent probe for sensitive (detection limit ~71 nM) and selective detection of H_2S_2 and hydrogen polysulfides.
7-Azido-4-methylcoumarin	CDX-A0069	Highly sensitive and selective fluorogenic H_2S probe.

Visit www.adipogen.com for a complete list of Reactive Oxygen Species Reagents.

Reactive Oxygen Species (ROS) Detection

Nitric Oxide Detection

Nitric oxide ($NO^{\bullet}$) is involved in various physiological and pathological processes in the cell and is implicated in **vasodilation, neurotransmission, cytotoxicity, immune response and inflammation**. Within cells, nitric oxide synthase (NOS) catalyses the conversion of arginine to citrulline and $NO^{\bullet}$ in the presence of molecular oxygen, tetrahydrobiopterin, NADPH and flavin cofactors. Due to the importance of $NO^{\bullet}$, real time detection and quantification of $NO^{\bullet}$ is of great interest. However, the extremely short half-life of $NO^{\bullet}$ limits the study of its physiological effect *in vivo*. Therefore $NO^{\bullet}$-sensitive fluorescent probes, such as DAF-2 have been designed and used in real-time imaging of $NO^{\bullet}$.

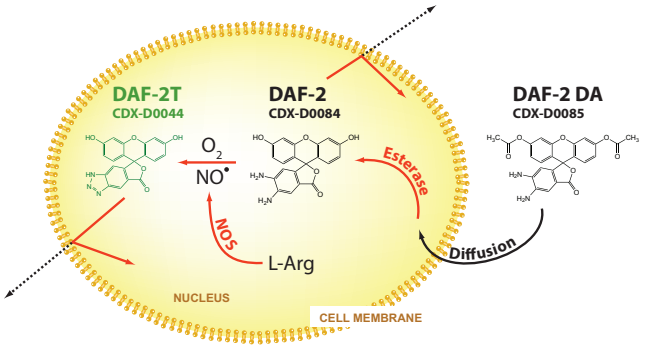
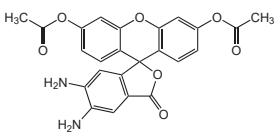


FIGURE: The cell-permeable diacetate derivative DAF-2 DA is used to load cells. Subsequent hydrolysis by cytosolic esterases releases DAF-2, which is relatively non-fluorescent at physiological pH. However, in the presence of $NO^{\bullet}$ and O_2, DAF-2 is converted to the fluorescent triazole derivative DAF-2T.

DAF & DAR Compounds: Sensitive Fluorescent Probes for NO Detection

DAF-2 DA

CDX-D0085 — 1 mg | 5 mg | 10 mg



DAF-2 diacetate is membrane permeant and is deacetylated by intracellular esterases to 4,5-diaminofluorescein (DAF-2). This compound can then be used for the fluorometric detection of nitric oxide and in fluorescence microscopy to measure real-time changes in nitric oxide levels *in vivo*. See Figure.

Spectral Properties: λex 491 nm; λem 513 nm.

Complete Panel of DAF Compounds

PRODUCT NAME	PID	SIZES
DAF-FM	CDX-A0023	1 mg | 5 mg
DAF-FM Solution	CDX-A0523	1 mg
DAF-FM DA	CDX-A0024	1 mg | 5 mg
DAF-FM DA Solution	CDX-A0524	1 mg
DAF-2	CDX-D0084	1 mg | 5 mg | 10 mg
DAF-2 Solution	CDX-D0584	1 mg
DAF-2 DA	CDX-D0085	1 mg | 5 mg | 10 mg
DAF-2 DA Solution	CDX-D0585	1 mg
DAF-4 DA	CDX-D0216	1 mg | 5 mg | 10 mg
DAF-4 DA Solution	CDX-D0516	1 mg
Controls		
DAF-2T	CDX-D0044	1 mg | 5 mg | 10 mg
DAF-2T Solution	CDX-D0544	1 mg
DAF-4T	CDX-D0211	1 mg | 5 mg | 10 mg

DAR and DAN Probes

PRODUCT NAME	PID	SIZES
DAN	CDX-D0062	1 g | 5 g
DAR-1	CDX-D0101	1 mg | 5 mg | 25 mg
DAR-1 Solution	CDX-D0601	1 mg
DAR-2	CDX-D0102	1 mg | 5 mg | 25 mg
DAR-2 Solution	CDX-D0602	1 mg
DAR-4	CDX-D0276	1 mg | 5 mg
DAR-4 Solution	CDX-D0576	1 mg
DAR-4M	CDX-D0206	1 mg | 5 mg
DAR-4M Solution	CDX-D0506	1 mg
DAR-M	CDX-D0121	1 mg | 5 mg
DAR-M Solution	CDX-D0521	1 mg
Controls		
DAR-1T	CDX-D0213	1 mg | 5 mg
DAR-1T Solution	CDX-D0513	1 mg
DAR-2T	CDX-D0214	1 mg | 5 mg
DAR-4T	CDX-D0275	1 mg | 5 mg
DAR-4T Solution	CDX-D0575	1 mg
DAR-4MT	CDX-D0220	1 mg | 5 mg
DAR-4MT Solution	CDX-D0520	1 mg
DAR-MT	CDX-D0274	1 mg | 5 mg
DAR-MT Solution	CDX-D0574	1 mg

Visit www.adipogen.com for a complete list of NO Probes.

AdipoGen® LIFE SCIENCES

Please visit our website **www.adipogen.com** for a comprehensive overview on all **Chemodex** Reagents.

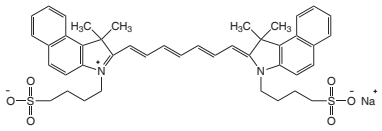
chemodex

Near Infrared Fluorescent Dyes – For *In Vivo* Imaging

Near-infrared (near-IR) dyes offer important advantages over traditional visible light dyes. Because cellular or tissue components produce minimal autofluorescence in the near-IR region, near-IR dyes have the potential to offer highly specific and sensitive detection in complex biological systems. Light with wavelength in the near-IR region has strong tissue penetration, allowing the use of **near-IR dyes for *in vivo* fluorescence imaging**.

Indocyanine Green [ICG]

CDX-I0013 100 mg | 500 mg



ICG is an *in vivo* molecular imaging probe. The infrared fluorescence emission penetrates tissues several millimeters to facilitate deep tissue and small animal *in vivo* imaging. ICG is used in medical diagnostics and for cancer cell and tumor targeting.

PRODUCT NAME	PID	SIZES
DTTCI	CDX-D0253	1 g | 5 g
HITCI	CDX-H0926	5 g
IR-783	CDX-I0058	250 mg
NIR 4d	CDX-N0035	10 mg | 50 mg
NIR-797-isothiocyanate	CDX-N0008	5 mg | 25 mg

Fluorogenic Substrates – Selected Compounds

PRODUCT NAME	PID	DESCRIPTION
AMQI	CDX-A0036	Fluorogenic substrate for cholinesterases.
Fluorescein dibutyrate	CDX-F0057	Fluorogenic substrate for esterases and lipases.
L-Leucine-7-amido-4-methylcoumarin HCl	CDX-L0003	Fluorogenic substrate for leucine aminopeptidases.
3'-O-Methylfluorescein	CDX-M0098	Selective fluorometric substrate for CYP2C19 and CYP1A1.
4-Methylumbelliferyl oleate	CDX-M0086	Fluorogenic substrate for lipases.
2'-(4-Methylumbelliferyl)-α-D-N-acetylneuraminic acid sodium salt hydrate	CDX-M0096	Fluorogenic substrate used to measure sensitively enzymatic neuraminidase activity.
Resorufin butyrate	CDX-R0044	Fluorogenic substrate for lipases and choline esterases.

Visit www.adipogen.com for a complete list of Fluorogenic Substrates and Fluorophores used in Enzymatic Assays.

Gram Staining – Fast Differentiation of Gram-positive and Gram-negative

Gram Staining is a differential staining technique most widely applied in all microbiology laboratories. It is one of the most important criteria in any identification scheme for all types of bacterial isolates. Different mechanisms have been proposed to explain the Gram reaction. There are many physiological differences between Gram-positive and Gram-negative cell walls. Ever since Christian Gram has discovered Gram staining, this process has been extensively investigated and redefined. The Gram staining allows a fast differentiation of bacteria in Gram-positive and Gram-negative.

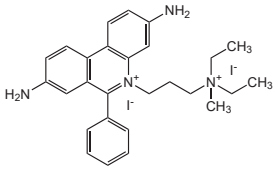
PRODUCT NAME	PID
Gram Staining Kit All-In-One	CDX-K0037
Gram's Crystal Violet Solution*	CDX-G0060
Gram's Iodine Solution*	CDX-G0065
Gram's Safranin Solution*	CDX-G0061
Gram's Decolorizer Solution*	CDX-G0062
Gram's Fuchsin Solution	CDX-G0064

Products marked with * are included in the All-in-One Kit.

Nucleic Acid Detection Probes – Cell Viability Dyes

Propidium iodide

CDX-P0023 25 mg | 500 mg | 5 g



The most common red-fluorescent nuclear stain. Membrane-impermeant and generally excluded from viable cells. It can easily penetrate dead or damaged cells and as such is commonly used for identifying cell viability in a population or as a counterstain in multicolor fluorescent techniques. It binds to DNA and RNA by intercalating between the bases.

Spectral Properties: λex 488-535 nm; λem 617 nm.

PRODUCT NAME	PID	DESCRIPTION
Acridine Orange HCl hydrate	CDX-A0005	Cell-permeable metachromatic fluorescent dye that stains DNA and RNA.
DAPI 2HCl	CDX-D0025	Cell-permeable, fluorescent dye that is a minor groove-binding probe for DNA.
Ethidium homodimer	CDX-E0012	Staining dye for ssDNA, dsDNA, RNA, oligonucleotides and triplex DNA. It does not cross intact cell membranes and can be used to test cell viability.
Ethidium bromide	CDX-E0005	Commonly used nucleic acid stain for PAGE or agarose gel electrophoresis.
Hoechst 33258	CDX-B0029	Useful for staining DNA, chromosomes and nuclei. For determining the DNA content of viable cells without detergent treatment or fixation.
Hoechst 33342	CDX-B0030	Useful for staining DNA, chromosomes and nuclei. For vital DNA staining of a variety of cell types and membrane permeability in mammalian cells.
Hoechst 34580	CDX-B0094	**Blue** fluorescent cell-permeable nucleic acid stain used for sensitive detection of DNA in the presence of RNA in agarose gels, automated DNA determination, sensitive determination of cell number and chromosome sorting.
Methyl Green Zinc chloride salt	CDX-M0641	Mainly used as a DNA stain in histochemistry.
Quinacrine Mustard 2HCl	CDX-Q0011	Fluorescent probe for labeling chromosomal DNA. Also used for measurement of sequence specificity with Taq DNA polymerase.
Thiazol Orange	CDX-T0013	Nucleic acid used for a variety of assays, PCR and flow cytometry.

Other Cell Viability Dyes

PRODUCT NAME	PID	DESCRIPTION
Calcein-AM	CDX-C0009	Non-fluorescent cell-permeable and hydrophobic probe that, upon entering live cells, is cleaved by intracellular esterases, releasing the membrane-impermeable, hydrophilic and intensely bright **green** fluorescent calcein.
5(6)-CFDA N-succinimidyl ester	CDX-C0037	Useful fluorescent tracer that can passively diffuse into cells and covalently label intracellular proteins, resulting in long-term cell labeling. The reagent itself is colorless and nonfluorescent but becomes brightly green fluorescent once it is hydrolyzed by intracellular esterases.
Fluorescein dioctanoate	CDX-F0087	Non-fluorescent hydrophobic fluorescein derivative that can pass through the cell membrane whereupon intracellular esterases hydrolyze the dioctanoate group producing the highly fluorescent product fluorescein.
Resorufin-isobutyrate	CDX-I0005	Cell-permeable resorufin derivative used as a fluorogenic indicator for cell viability.

Visit www.adipogen.com for a complete list of Cell Viability Probes.

Cell Biology Dyes & Probes

Stains for Cellular Organelles & Processes

PRODUCT NAME	PID	DESCRIPTION
Alcian Blue 8GX	CDX-A0001	Primarily used for detection of acid mucopolysaccharides.
Berberine chloride	CDX-B0212	Natural fluorescent dye used in histology for staining heparin in mast cells.
Dansylcadaverine	CDX-D0189	Used to monitor autophagy. Accumulates in autophagic vacuoles due to a combination of ion trapping and specific interactions with membrane lipids.
4-Di-2-ASP	CDX-D0012	Mitochondrial dyes used to stain presynaptic nerve terminals independent of neuronal activity.
Thiazolyl blue tetrazolium bromide [MTT]	CDX-T0186	Common histochemical/cytochemical reagent and for the detection of NAD.
NBD-dodecanoic acid	CDX-N0013	Suitable for probing the ligand binding sites of fatty acid and sterol carrier proteins.
NBD-PZ	CDX-N0014	Used in carbohydrate analysis, also useful in fluorescence visualization of lysosomes in live cell lines in culture.
Nile Red	CDX-N0107	This lipophilic stain is commonly used for the detection of intracellular lipid droplets in cells.
Resazurin sodium salt [Almar Blue]	CDX-R0051	Useful for detecting reductive activities in cells and widely used for measuring cell proliferation and mitochondrial metabolic activity.
Rhodamine 6G	CDX-R0032	Highly fluorescent hydrophilic pH-sensitive dye. Often used as a tracer dye within water to determine the rate and direction of flow and transport.
Sulforhodamine 101	CDX-S0025	Non-fixable **red** fluorescent dye used as a specific marker for astrocytes and an activity-dependent probe for monitoring regulated exocytosis.

Selected Fluorescent Labeling Reagents

PRODUCT NAME	PID	DESCRIPTION
AMCA-X N-succinimidyl ester	CDX-A0074	Amine-reactive, UV-excitable, **blue** fluorescent dye.
CCVJ	CDX-C0085	Fluorescent molecular rotor.
6-FAM N-succinimidyl ester	CDX-C0017	Popular **green** fluorescent amine-reactive cell-permeable dye.
5(6)-FITC	CDX-F0010	Most popular fluorescent labeling reagent for oligonucleotides and peptides.
Fluorescein-5-thiosemicarbazide	CDX-F0005	Fluorescent tag for labeling of cell-surface functional groups (glycophorins) and many other diverse molecules, including DNA, RNA, polysaccharides, sialylated glycoproteins, carbonylated proteins, carbonyl derivatives and N-acetylneuraminic acid.
N-(5-Fluoresceinyl)-maleinimide	CDX-F0004	**Green** fluorescent thiol-reactive dye, widely used as protein and peptide fluorescent labeling reagent.
Green CMFDA	CDX-C0103	Thiol-reactive, cell-permeant **green** fluorescent probe with high selectivity. Well suited for monitoring cell movement or location.
CPM	CDX-D0042	Widely used **blue** fluorescent thiol-reactive dye. Used to monitor release of thiols and to distinguish proliferating cancer cells by nucleolar protein staining.
6-HEX dipivaloate	CDX-C0187	Amine-reactive dye used in nucleic acid sequencing and to label peptides and oligonucleotides.
NBD-Cl	CDX-C0010	Reacts with primary or secondary amines to produce a fluorescent product.
5(6)-ROX N-succinimidyl ester	CDX-C0013	Amine-reactive long wavelength rhodamine dye. Derivatives are widely used for oligonucleotide labeling and automated DNA sequencing applications.
5-TAMRA Maleimide	CDX-T0029	Thiol-reactive fluorescent probe widely used for modifications of peptides and proteins.
6-TAMRA N-succinimidyl ester	CDX-C0058	Amine-reactive fluorescent dye for DNA, peptides and proteins labeling. Used for oligonucleotide labeling and automated DNA sequencing applications.
6-TET dipivaloate	CDX-C0186	Amine-reactive dye used in nucleic acid sequencing and to label peptides and oligonucleotides.

Visit www.adipogen.com for a complete list of Fluorescent Labeling Probes.

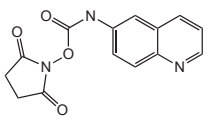
HPLC Derivatization Reagents

HPLC is used extensively as a method for detecting and determining trace components. Derivatization of target substances for analysis with labeling reagents is a standard approach to obtain higher sensitivity and selectivity. A great number of labeling reagents have been reported for this application.

AQC

CDX-A0057 — 50 mg | 250 mg

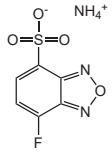
Reactive probe for the pre-column derivatization of primary and secondary amines. Suitable for amino acid analysis by HPLC.



SBD-F

CDX-F0002 — 5 mg | 25 mg | 250 mg

Fluorescent probe for thiols widely used in pre-column labeling of biological thiols in HPLC.



PRODUCT NAME	PID	SIZES
ABD-F	CDX-F0016	10 mg
9-Anthracene-carbaldehyde	CDX-A0180	5 g | 500 g
2-Anthracenyl-sulfonyl chloride	CDX-A0062	100 mg | 1 g
Coumarin-6-sulfonyl chloride	CDX-C0029	50 mg
DAABD-AE	CDX-D0204	50 mg | 250 mg
DACB-CN	CDX-D0016	10 mg | 100 mg
7-DCCA	CDX-D0036	100 mg | 200 mg | 1 g
DPM	CDX-D0049	25 mg | 250 mg
IDA	CDX-M0001	5 mg | 25 mg | 250 mg
MPAC-Br	CDX-B0018	10 mg | 50 mg | 250 mg
NBD-F	CDX-F0017	25 mg | 250 mg
NBD-hydrazine	CDX-H0022	25 mg | 100 mg

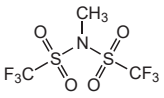
Visit www.adipogen.com for a complete list of Derivatizing Agents.

Alkylation Agent

N-Methyl bis[(trifluoromethyl)sulfonyl]imide

CDX-M0154 — 2.5 g | 5 g | 25 g

Powerful alkylation agent. Used for direct methylation and trifluoroethylation of imidazole and pyridine derivatives to produce a variety of room temperature ionic liquids (RTILs).

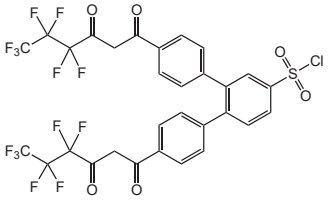


TR-FRET Reagents

BHHCT

CDX-H0041 — 5 mg | 100 mg | 1 g

Sensitive label for time-resolved fluoroimmunoassay via the europium chelate. Ligand for TR-FRET-complexes (with Eu^{3+}). This label is characterized by very large Stoke's shift, broad excitation and narrow emission bands.

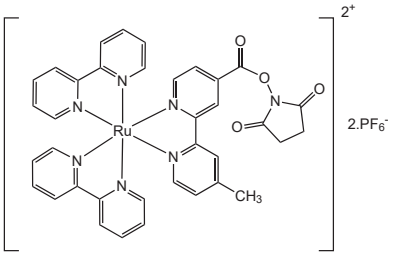


Acylation of Amino Acid Side Chains

$Ru(bpy)_2(mcbpy\text{-}O\text{-}Su\text{-}ester)(PF6)_2$

CDX-B0032 — 1 mg | 5 mg

Highly sensitive, ready-to-use fluorescent stain for the detection of total proteins separated by polyacrylamide gel electrophoresis (PAGE). Ideal for use in 1D and 2D PAGE.



References Compounds & Quorum Sensing

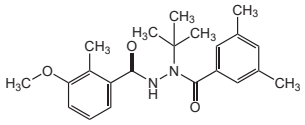
Organic Pollutant & Pesticide Reference Compounds

Pesticides are substances intended for preventing, destroying or controlling any pest. The most common use of pesticides is in agriculture. Pesticides are mostly classified by target organism (e.g. Herbicides, Insecticides, Fungicides, etc.) and chemical structure (e.g. organic, inorganic, synthetic or biological). Many of the pesticides significantly alter the ecosystem (toxic to human or concentrated in food chain). Chemodex offers a broad panel of insecticides, herbicides, fungicides and growth factor inhibitor substances (not Standards) as reference compounds to study the mode of action of these compounds.

Methoxyfenozide

CDX-M0133 — 100 mg | 1 g

Diacylhydrazine insecticide. Ecdysone agonist, causing premature molting and interfering with the normal growth and development in insects.



Visit www.adipogen.com for a complete list of ~100 Pesticide Reference Compounds.

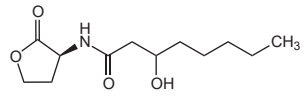
Quorum Sensing Reagents

Quorum sensing is a signaling system used by bacteria to coordinate gene expression, biofilm formation, virulence and antibiotic resistance based upon their population density. The system involves the exchange of signaling molecules among bacteria via cell receptors. Next to the potential antimicrobial functionality, quorum-sensing molecules are recently investigated for their use in **immunology and oncology**, based on findings that they can modulate prokaryote-eukaryote signaling and due to the similarities between the bacterial quorum-sensing mechanisms and the metastatic process initiated by tumor cells. **Chemodex offers the largest panel of Quorum Sensing Agents and Inhibitors.**

N-(3-Hydroxyoctanoyl)-L-homoserine lactone [OH-C10-HSL]

CDX-H0206 — 10 mg | 25 mg

A small diffusible signaling molecule. Member of the N-acyl-homoserine lactone (AHL) family.



PRODUCT NAME	PID
N-Ethanoyl-L-homoserine lactone	CDX-E0072
N-Butanoyl-DL-homoserine lactone	CDX-B0280
N-Butanoyl-L-homoserine lactone	CDX-B0267
N-Hexanoyl-L-homoserine lactone	CDX-H0111
N-Heptanoyl-L-homoserine lactone	CDX-H0112
N-Octanoyl-L-homoserine lactone	CDX-O0038
N-Pentanoyl-L-homoserine lactone	CDX-P0486
N-Decanoyl-L-homoserine lactone	CDX-D0332
N-Undecanoyl-L-homoserine lactone	CDX-U0026
N-Dodecanoyl-L-homoserine lactone	CDX-D0335
N-Tetradecanoyl-L-homoserine lactone	CDX-T0144
N-Hexadecanoyl-L-homoserine lactone	CDX-H0113
N-Octadecanoyl-L-homoserine lactone	CDX-O0137

PRODUCT NAME	PID
3-Hydroxy-butanoyl-L-homoserine lactone	CDX-H0084
N-(3-Hydroxyoctanoyl)-L-homoserine lactone	CDX-H0206
N-(3-Oxohexanoyl)-L-homoserine lactone	CDX-O0057
N-(3-Oxooctanoyl)-L-homoserine lactone	CDX-O0058
N-(3-Oxohexadecanoyl)-L-homoserine lactone	CDX-O0061
trans-2-Decenoic acid	CDX-D0300
Furanone C30	CDX-B0220
2-Heptyl-3-hydroxyl-4-quinolone	CDX-H0077
cis-11-Methyl-2-dodecenoic acid	CDX-M0075

Visit www.adipogen.com for a complete list of Quorum Sensing Agents (DL and L).

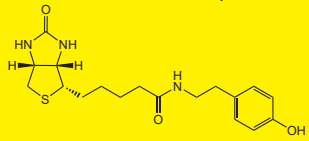
Specialty Reagents

TSA (Tyramide Signal Amplification) & Biotin Cross-Linking Reagents

Biotinyl tyramide is a substrate of the horseradish peroxidase enzyme. Used as a reagent to amplify immunohistochemical signals. Fluorescence-based tyramide signal amplification (TSA) has been widely used in immunohistochemistry, immunoelectron microscopy, fluorescent *in situ* hybridization (FISH) and fluorescence ELISA. The TSA method has been reported to increase the detection sensitivity up to 100-fold as compared with conventional avidin-biotinylated enzyme complex procedures. It can be added to any standard IHC protocol and reduces the use of other reagents; it improves signal to noise by reducing the titer of other reagents in the assay protocol; it enables multi-target detection in both IHC and (F)ISH applications.

Biotinyl tyramide

CDX-B0270 — 100 mg | 500 mg



Used in catalyzed reporter deposition (CARD) signal amplification protocols in a variety of immunoassays in which horseradish peroxidase catalyzed deposition of biotinyl tyramide is detected with labeled streptavidin.

LIT: M.N. Bobrow, et al.; J. Immunol. Meth. **125,** 279 (1989) • G. Mayer, et al.; J. Histochem. Cytochem. **45,** 1449 (1997)

Ask for BULK Quantities !

Visit www.adipogen.com for a complete list of Biotin Derivatives.

Biotin Cross-Linking & Biotinylating Reagents

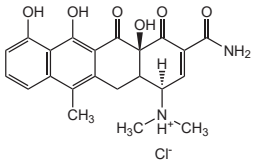
PRODUCT NAME	PID	SIZES
Biotin-X	CDX-B0143	100 mg | 500 mg
Biotin-X-NHS	CDX-B0139	25 mg | 100 mg
Biotin-XX	CDX-B0632	50 mg | 100 mg
d-Desthiobiotin	CDX-D0272	500 mg | 1 g
(+)-Biotin N-hydroxy-succinimide ester	CDX-B0145	100 mg | 250 mg

PRODUCT NAME	PID	SIZES
N-Biotinyl-NH-$(PEG)_2$-COOH . DIPEA	CDX-B0209	50 mg | 250 mg
(+)-Biotin-PFP-ester	CDX-B0308	100 mg | 250 mg
Sulfo-NHS-LC-Biotin . Na	CDX-B0310	10 mg | 50 mg

Potent Gene Expression Effector

Anhydrotetracycline HCl

CDX-A0197 — 500 mg | 2.5 g



A tetracycline derivative exhibiting no antibiotic activity. A useful effector of tetracycline-dependent gene expression in bacterial expression systems.

LIT: M. Gossen & H. Bujard; Nucleic Acids Res. **21,** 4411 (1993)

APIs & Building Blocks

Chemodex offers a broad range of Active Pharmaceutical Ingredients (APIs) and isolated natural compounds. Highly pure active compounds of medicinal used mixtures and extracts are provided not for human use for **Research-use-Only** (for *in vitro* and *in vivo* laboratory experiments). This includes antibiotic, anticancer, anti-inflammatory and neurological agents.

In addition, Chemodex also offers a broad range of Difficult to Access Building Blocks for organic chemistry. Most of them are used either for the synthesis of fluorescent probes or for the development of APIs and allow the production of desired compounds in laboratory scale.

Visit www.adipogen.com for a complete list of Chemodex APIs, Building Blocks, Fluorescent Reagents and More !!!

chemodex
CHEMISTRY IS OUR PASSION™

collaborating with

曜鴻生物科技有限公司
Yao-Hong Biotechnology Inc.

02-2668 6845
yaohong@yh-bio.com.tw