



**chemodex**  
CHEMISTRY IS OUR PASSION

**Chemodex** is a Swiss company manufacturing an attractive product portfolio at very competitive prices.

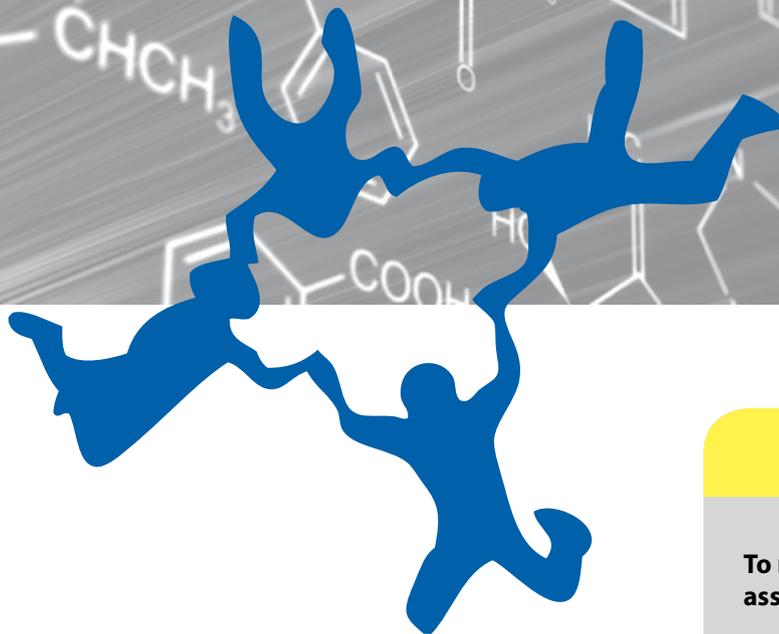
Over **300 Products**

- ◆ Common and New Fluorescent Probes
- ◆ Stains/Labels/Dyes
- ◆ Markers & Probes
- ◆ Metabolites
- ◆ Building Blocks & Small Molecules

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

**Adipogen International** provides all **Chemodex** Reagents worldwide. Please contact us for further information.

**For Product Inquiries:**  
[info@adipogen.com](mailto:info@adipogen.com)



## Zinc Probes

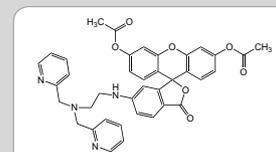
To monitor intracellular zinc fluxes associated with apoptosis.

### ZnAF-2 DA

CDX-Z0008

1 mg | 5 mg | 25 mg

Suitable for the fluorometric detection of  $Zn^{2+}$  (after esterase hydrolysis).

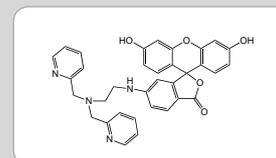


### ZnAF-2, 6-Iso

CDX-Z0006

5 mg | 25 mg

Membrane-impermeable compound that acts as a high-affinity  $Zn^{2+}$ -specific fluorescent probe. Exhibits little affinity towards  $Ca^{2+}$ ,  $Mg^{2+}$ ,  $Na^+$  or  $K^+$ .

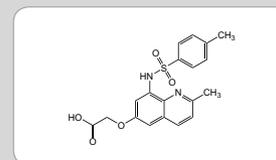


### Zinquin (free acid)

CDX-Z0014

1 mg | 5 mg | 25 mg

$Zn^{2+}$ -specific fluorophore that forms zinquin- $Zn^{2+}$  complexes. Used to detect zinc in cells by UV fluorescence.

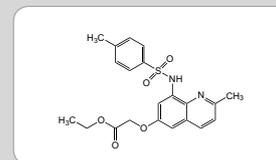


### Zinquin ethyl ester

CDX-Z0013

1 mg | 5 mg | 50 mg

Lipophilic, zinc-sensitive, fluorescent derivative of zinquin that is able to penetrate cell membranes. Cleavage of the ethyl ester group via cytosolic esterases in living cells impedes its efflux across the plasma membrane.



**For all  $Zn^{2+}$  Probes from Chemodex please visit our website [www.adipogen.com](http://www.adipogen.com)**

# Markers, Labels, Stains and Probes

## Alcian Blue 8GX

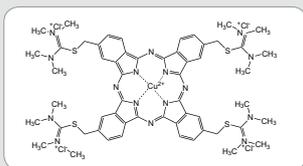
CDX-A0001

5 g | 20 g | 250 g

**Formula:** C<sub>56</sub>H<sub>68</sub>Cl<sub>4</sub>CuN<sub>16</sub>S<sub>4</sub>

**MW:** 1298.87

**CAS:** 75881-23-1



Widely used cationic bluish-green dye for both light and electron microscopy to stain acidic polysaccharides such as glycosaminoglycans in cartilages and other body structures, some types of mucopolysaccharides, sialylated glycocalyx of cells, etc. Can be used to quantitate acidic glycans both in microspectrophotometric quantitation in solution or for staining glycoproteins in polyacrylamide gels or on western blots.

## Alcian Blue 8GX Solution

CDX-A0201

2.5 l

## 5-CFDA

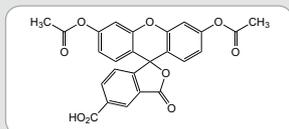
CDX-C0039

25 mg | 100 mg | 1 g

**Formula:** C<sub>25</sub>H<sub>16</sub>O<sub>9</sub>

**MW:** 460.39

**CAS:** 79955-27-4



Popular cell permeable, sensitive, fluorescent substrate for measuring esterase activity in live cells. Used in cell viability assays and "Live-Dead" assay systems, especially automated cell viability assays. The cleavage product produced upon enzymatic or chemical hydrolysis of the acetate group(s) is carboxyfluorescein which is well-retained inside live cells. Can be used to monitor cells by flow cytometry or fluorescence microscopy.

**Also available:** 6-CFDA | 5(6)-CFDA | 5(6)-CFDA N-succinimidyl ester

## Dil Stain

[1,1'-Dioctadecyl-3,3',3'-tetramethylindocarbocyanine perchlorate]

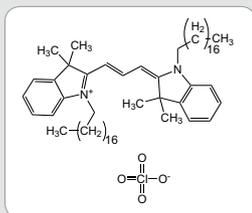
CDX-D0230

100 mg | 1 g

**Formula:** C<sub>59</sub>H<sub>97</sub>ClN<sub>2</sub>O<sub>4</sub>

**MW:** 933.87

**CAS:** 41085-99-8



Lipophilic orange-red fluorescent membrane stain that diffuses laterally to stain the entire cell. The fluorescence of this environment-sensitive dye is greatly enhanced when incorporated into membranes or bound to lipophilic biomolecules such as proteins. It shows a high extinction coefficient, polarity-dependent fluorescence and short excited-state lifetime. Often used for single molecule imaging, fate mapping and as a long-term tracer for neuronal and other cells.

## 7-Diethylaminocoumarin-3-carboxylic acid

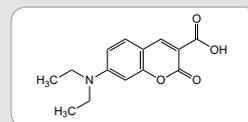
CDX-D0036

100 mg | 200 mg | 1 g

**Formula:** C<sub>14</sub>H<sub>15</sub>NO<sub>4</sub>

**MW:** 261.27

**CAS:** 50995-74-9



Fluorescent label for amine modification and protein conjugation. It has a strong blue fluorescence and can be used to create blue fluorescent bioconjugates or labeling synthetic peptides for high-throughput detection.

## 5-FAM

[5-Carboxyfluorescein]

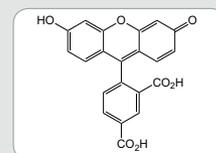
CDX-C0014

25 mg | 100 mg | 1 g

**Formula:** C<sub>21</sub>H<sub>12</sub>O<sub>7</sub>

**MW:** 376.32

**CAS:** 76823-03-5



Single isomer that can be used to react with primary amines via carbodiimide activation of the carboxylic acid. One of the most popular green fluorescent reagents used for click chemistry labeling of peptides, proteins, nucleotides or even small molecules. Has a relatively high absorptivity, excellent fluorescence quantum yield and good water solubility.

**Also available:** 6-FAM

## Fluorescein-5-thiosemicarbazide

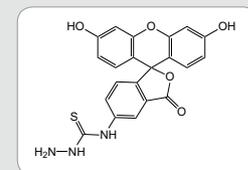
CDX-F0005

50 mg | 100 mg | 500 mg

**Formula:** C<sub>21</sub>H<sub>15</sub>N<sub>3</sub>O<sub>5</sub>S

**MW:** 421.43

**CAS:** 76863-28-0



Used for labeling of cell-surface functional groups (glycophorins). Cell impermeant fluorescent probe useful for determining protein and peptide topology on the cell surface and detection of protein carbonyls in aging tissues.

**Also available:** 5-FITC | 5-FITC DA | 5(6)-FITC | 5(6)-FITC DA | 6-FITC DA | FDP | FDS | Fluorescein dibutyrate | Fluorescein octadecyl ester | FMP | FMS | FOAA | 6-IAF | Fluo-3 AM and more





## GSH-OEt

[Glutathione-reduced ethyl ester]

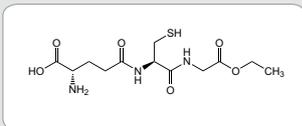
CDX-G0006

100 mg | 500 mg | 5 g

**Formula:** C<sub>12</sub>H<sub>21</sub>N<sub>3</sub>O<sub>6</sub>S

**MW:** 335.38

**CAS:** 92614-59-0



Membrane/lipid permeable derivative of GSH. Used to protect cells against radiation damage, oxidants and various toxic compounds including heavy metals. Undergoes hydrolysis by intracellular esterases thereby increasing intracellular GSH concentration.

## 5-Maleimido-eosin

[Eosin-5-maleimide]

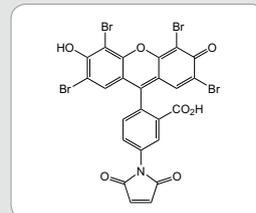
CDX-M0013

10 mg | 100 mg

**Formula:** C<sub>24</sub>H<sub>9</sub>Br<sub>4</sub>NO<sub>7</sub>

**MW:** 742.95

**CAS:** 150322-02-4



Triplet probe used for the measurement of rotational diffusion of proteins in solution and in membranes, including myosin and pyruvate dehydrogenase. Bioconjugates made with the thiol-reactive 5-Maleimide-eosin can be used as phosphorescent probes or as photosensitizers.

## Hoechst 33258

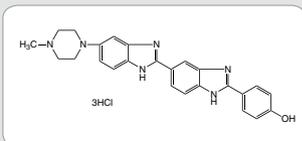
CDX-B0029

500 mg | 5 g

**Formula:** C<sub>25</sub>H<sub>24</sub>N<sub>6</sub>O · 3HCl

**MW:** 533.88

**CAS:** 23491-45-4



Fluorescent nucleic acid stain useful for staining DNA, chromosomes, nuclei and mitochondria. Binds to the minor groove of DNA at AT-rich sequences. This dye is commonly used for quantitating double-stranded DNA (dsDNA) of viable cells without detergent treatment or fixation and for fluorescence microscopy or flow cytometry. This dye also allows for quantitative measurements when plotted in a standard emission-to-content curve.

**Also available: Hoechst 33342 & 34580**

## NBD-Cl

[4-Chloro-7-nitrobenzofurazan]

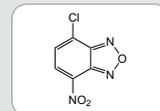
CDX-C0010

1 g | 10 g | 50 g

**Formula:** C<sub>6</sub>H<sub>2</sub>ClN<sub>3</sub>O<sub>3</sub>

**MW:** 199.55

**CAS:** 10199-89-0



Non-fluorescent. Generates highly fluorescent products upon reacting with aliphatic amines, amino acids, peptides and proteins or thiol compounds. Widely used to label peptides, proteins, drugs and other biomolecules. It is a popular derivatizing reagent for HPLC analysis of amino acids and low molecular weight amines.

**Also available: NBD-dodecanoic acid | NBD-F | NBD-methylhydrazine | NBD-PZ | NBD-undecanoic acid | NBD-X**

## Laurdan

[N,N-Dimethyl-6-dodecanoyl-2-naphthylamine]

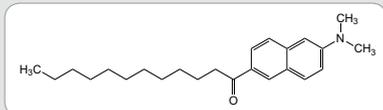
CDX-D0098

50 mg | 1 g

**Formula:** C<sub>24</sub>H<sub>35</sub>NO

**MW:** 353.54

**CAS:** 74515-25-6



Fluorescent probe used to investigate membrane qualities of the phospholipid bilayers of cell membranes, sensitive to membrane phase transitions as well as other alterations to membrane fluidity such as the penetration of water. Variations in membrane water content cause blue shifts in the laurdan emission spectrum, which are quantified by calculating the generalized polarization (GP). Can be applied to living cells.

## Pyridoxal hydrochloride

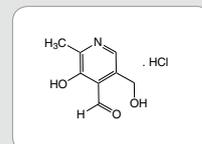
CDX-P0118

50 g | 1 kg

**Formula:** C<sub>8</sub>H<sub>9</sub>NO<sub>3</sub> · HCl

**MW:** 203.62

**CAS:** 65-22-5



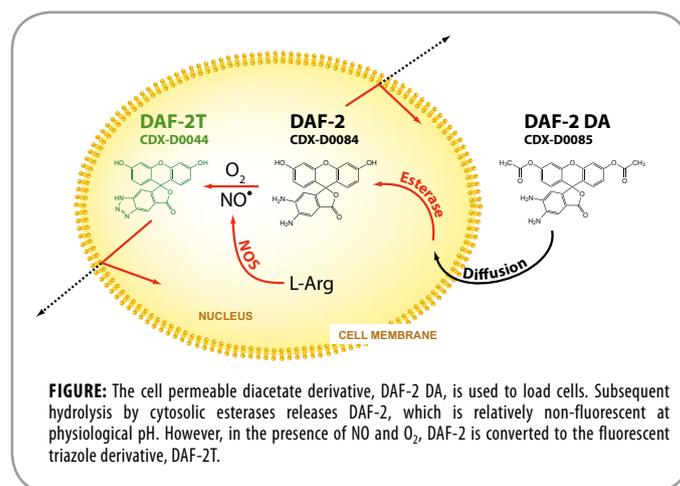
Pyridoxal is one of the three natural forms of vitamin B6, along with pyridoxamine and pyridoxine. All of these forms are converted in the human body into a single biologically active form, pyridoxal 5-phosphate. Used for the labeling of amino acids and their detection in picomolar amounts. Used in a variety of studies including those of media supplements.

# DAF Compounds –

## Fluorescent Probes for the Detection of Nitric Oxide

Nitric oxide (NO) is involved in various physiological and pathological processes in the cell and has been implicated in vasodilation, neurotransmission, cytotoxicity, immune response and inflammation. Within cells, nitric oxide synthase (NOS) catalyses the conversion of arginine to citrulline and NO in the presence of molecular oxygen, tetrahydrobiopterin, NADPH and flavin cofactors. Due to the importance of NO, real time detection and quantification of NO is of great interest.

However, the extremely short half-life of NO limits the study of its physiological effect *in vivo*. Therefore NO-sensitive fluorescent probes, such as DAF-2 have been designed and used in real-time imaging of NO.



### DAF-2

CDX-D0084

1 mg | 5 mg | 10 mg

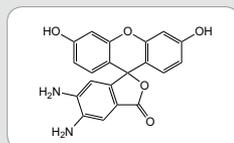
**Formula:** C<sub>20</sub>H<sub>14</sub>N<sub>2</sub>O<sub>5</sub>

**MW:** 362.34

**CAS:** 205391-01-1

Sensitive fluorescent probe for NO detection.

**Positive control:** DAF-2T



### Large Panel of DAF Compounds:

<b>DAF-2 DA</b>	CDX-D0085	1 mg   5 mg   10 mg
<b>DAF-2T</b>	CDX-D0044	1 mg   5 mg   10 mg
<b>DAF-FM</b>	CDX-A0023	1 mg   5 mg
<b>DAF-FM DA</b>	CDX-A0024	1 mg   5 mg
<b>DAR-1</b>	CDX-D0101	1 mg   5 mg   25 mg
<b>DAR-2</b>	CDX-D0102	1 mg   5 mg   25 mg

## Quorum Sensing

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.

### Large Panel of Quorum Sensing Molecules

#### 2-Heptyl-3-hydroxyl-4-quinolone

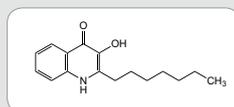
CDX-H0077

25 mg | 250 mg

**Formula:** C<sub>16</sub>H<sub>21</sub>NO<sub>2</sub>

**MW:** 259.34

**CAS:** 108985-27-9



Quorum sensing-regulated virulence factor used to induce and study the regulation of virulence genes such as those involved in iron scavenging.

#### 1,2,3,4,5,6,7,8-Octahydro-naphthalene

#### 3-Oxo-dodecan-(2-aminocyclohexanone)

#### N-(3-Hydroxydecanoyl)-DL-homoserine lactone

#### N-(3-Hydroxydodecanoyl)-DL-homoserine lactone

#### N-(3-Hydroxyoctanoyl)-DL-homoserine lactone

#### N-(3-Hydroxytetradecanoyl)-DL-homoserine lactone

#### N-(3-Oxododecanoyl)-L-homoserine lactone