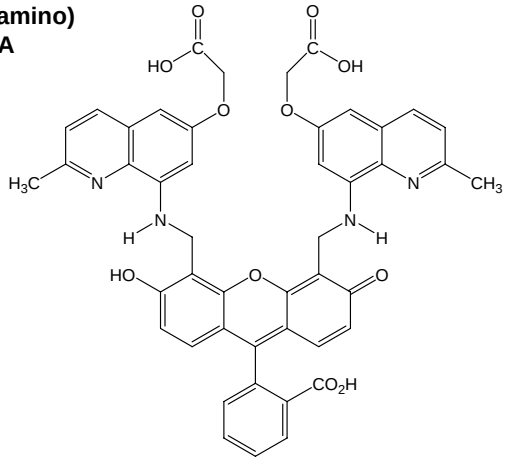
# Nitric Oxide Sensor (Extracellular) Kit ("NO-ON") (FL2A) (Cell-impermeable NO fluorescent probe)

metals • inorganics • organometallics • catalysts • ligands • custom synthesis • cGMP facilities • nanomaterials

## Kit Catalog number: 96-0397

**Active Ingredient:** **2-{4,5-Bis[(6-(2-ethoxy-2-oxoethoxy)-2-methylquinolin-8-ylamino) methyl]-6-hydoxy-3-oxo-3H-xanthen-9-yl}benzoic acid FL2A**



## Catalog number - 07-0287

**Introduction:**

The copper complex of **FL2A** is a novel, cell-impermeable fluorescent NO probe, that allows direct imaging of nitric oxide produced through fluorescence turn on. A solution of the copper (II) complex of **FL2A** can be readily prepared using this kit. For additional information, consult the following references:

1. *Inorg. Chem.*, **2010**, *49*, 7464.
2. *PNAS*, **2010**, *107*, 8525.

**Contents:**

Ligand **FL2A**: 5 x 0.5mg
Dimethylsulfoxide (ACS spectrophotometric grade): 5 x 1.0ml
Copper (II) chloride (1.0 mM solution in water): 5 x 1.0ml

**MSDS:**

The Material Safety Data Sheets for the three products contained in this kit can be downloaded from the Strem Chemicals Web Site at www.strem.com. Locate the MSDS using the following catalog numbers:
**FL2A**: 07-0291
Dimethylsulfoxide (ACS spectrophotometric grade): 97-4940
Copper (II) chloride as a 1.0 mM solution in water: 97-3060

**Storage conditions:**

The kit should be stored at -20°C and protected from light.

**Preparation of the active copper complex of FL2A:**

**Step I**

Allow the kit to warm to room temperature. Add 589 microliters of DMSO to a 0.5mg vial of **FL2A** (resulting concentration - 1.0 mM). The **FL2A** is readily soluble in the DMSO. The solution can be partitioned into aliquots of 40-300 µL as required. These solutions must be stored in the freezer at <-20°C. The DMSO solution of **FL2A** is stable for three months at -80°C. It is advisable to check the extinction coefficient of the solution before preparing the copper complex.
(log ϵ(499 nm) = 4.66)

**Step II**

A $Cu_2$**FL2A** solution should be freshly prepared by adding 1:2 **FL2A** solution (1.0 mM) to the copper (II) solution (1.0 mM) at room temperature.
Note: The prepared DMSO/water stock solution of Cu**FL2A** solution [log ϵ(495 nm) = 4.19] can be kept at room temperature, but should be protected from light. The solution can be diluted with media to provide the concentration required for cell sensing experiments. When the extinction coefficient of the red solution of Cu**FL2A** diminishes by 20% of the original value, the solution should be discarded. Do not use the solution after 1 hour, and do not freeze the solution.

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# Nitric Oxide Sensor (Intracellular) Kit ("NO-ON") (FL) (Cell-permeable NO fluorescent probe)

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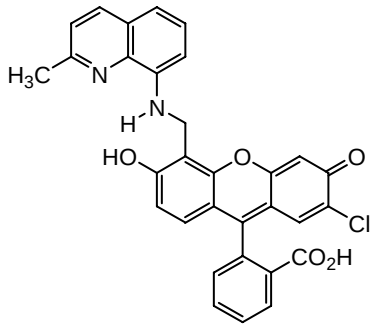
## Kit Catalog number: 96-0293

**Active Ingredient:** 2-{2-Chloro-6-hydroxy-5-[2-methylquinolin-8-ylamino)methyl]-3-oxo-3H- xanthen-9-yl}benzoic acid **(FL)**




## Catalog number - 07-0293

**Introduction:**

The copper complex of **FL** is a novel, cell-permeable fluorescent NO probe that allows direct imaging of nitric oxide produced in living cells through fluorescence turn on. The probe is best suitable for immediate intracellular detection of NO. Imaging of the cells with CuFL be performed at the latest one hour after incubation.
A solution of the copper (II) complex of **FL** can be readily prepared using this kit. For additional information, consult the following references:


1. *Nature Chemical Biology*, **2006**, *2*, 375.
2. *Nature Protocols*, **2007**, *2*, 408.
3. *J. Am. Chem. Soc.*, **2006**, *128*, 14364.


**Contents:**

Ligand **FL**: 5 x 0.5mg
Dimethylsulfoxide (ACS spectrophotometric grade): 5 x 1.0ml
Copper (II) chloride (1.0 mM solution in water): 5 x 1.0ml

**MSDS:**

The Material Safety Data Sheets for the three products contained in this kit can be downloaded from the Strem Chemicals Web Site at www.strem.com. Locate the MSDS using the following catalog numbers:
**FL**: 07-0293
Dimethylsulfoxide (ACS spectrophotometric grade): 97-4940
Copper (II) chloride as a 1.0 mM solution in water: 97-3060

**Storage conditions:**

The kit should be stored at -20°C and protected from light.

**Preparation of the active copper complex of FL:**

**Step I**

Allow the kit to warm to room temperature. Add 931 microliters of DMSO to a 0.5mg vial of **FL** (resulting concentration - 1.0 mM). The **FL** is readily soluble in the DMSO. The solution can be partitioned into aliquots of 40-300 µL as required. These solutions must be stored in the freezer at <-20°C. The DMSO solution of **FL** is stable for three months at -80°C. It is advisable to check the extinction coefficient of the solution before preparing the copper complex.
(log ϵ(504 nm) = 4.62)

**Step II**

A Cu**FL** soluton should be freshly prepared by adding 1:1 **FL** solution (1.0 mM) to the copper (II) solution (1.0 mM) at room temperature.
Note: The prepared DMSO/water stock solution of Cu**FL** solution [log ϵ(499 nm) = 4.60] can be kept at room temperature, but should be protected from light. The solution can be diluted with media to provide the concentration required for cell sensing experiments. When the extinction coefficient of the red solution of Cu**FL** diminishes by 20% of the original value, the solution should be discarded. Do not use the solution after 1 hour, and do not freeze the solution.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# Nitric Oxide Sensor (Intracellular) Kit ("NO-ON") (FL2E) (Cell-trappable NO fluorescent probe)

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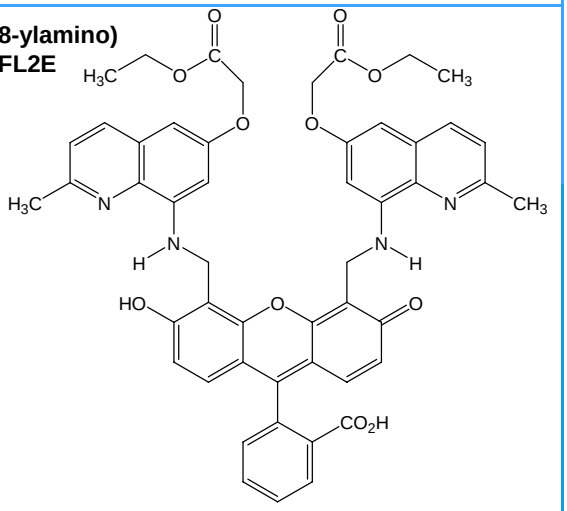
## Kit Catalog number: 96-0396

**Active Ingredient:** **2-{4,5-Bis[(6-(2-ethoxy-2-oxoethoxy)-2-methylquinolin-8-ylamino) methyl]-6-hydoxy-3-oxo-3H-xanthen-9-yl}benzoic acid FL2E**



## Catalog number - 07-0291

**Introduction:**

The copper complex of **FL2E** is a novel, cell-trappable fluorescent NO probe, that allows direct imaging of nitric oxide produced in living cells through fluorescence turn on. The FL2E ligand is trapped in the cell. A solution of the copper (II) complex of **FL2E** can be readily prepared using this kit.
For additional information, consult the following references:


1. *Inorg. Chem.,* **2010**, *49*, 7464.


**Contents:**

Ligand **FL2E**: 5 x 0.5mg
Dimethylsulfoxide (ACS spectrophotometric grade): 5 x 1.0ml
Copper (II) chloride (1.0 mM solution in water): 5 x 1.0ml

**MSDS:**

The Material Safety Data Sheets for the three products contained in this kit can be downloaded from the Strem Chemicals Web Site at www.strem.com. Locate the MSDS using the following catalog numbers:
**FL2E**: 07-0291
Dimethylsulfoxide (ACS spectrophotometric grade): 97-4940
Copper (II) chloride as a 1.0 mM solution in water: 97-3060

**Storage conditions:**

The kit should be stored at -20°C and protected from light.

**Preparation of the active copper complex of FL2E:**

**Step I**

Allow the kit to warm to room temperature. Add 571 microliters of DMSO to a 0.5mg vial of **FL2E** (resulting concentration - 1.0 mM). The **FL2E** is readily soluble in the DMSO. The solution can be partitioned into aliquots of 40-300 µL as required. These solutions must be stored in the freezer at <-20°C. The DMSO solution of **FL2E** is stable for three months at -80°C. It is advisable to check the extinction coefficient of the solution before preparing the copper complex.
(log ϵ(500 nm) = 4.25)

**Step II**

A $Cu_2$**FL2E** soluton should be freshly prepared by adding 1:2 **FL2E** solution (1.0 mM) to the copper (II) solution (1.0 mM) at room temperature.
Note: The prepared DMSO/water stock solution of Cu**FL2E** solution [log ϵ(496 nm) = 4.05] can be kept at room temperature, but should be protected from light. The solution can be diluted with media to provide the concentration required for cell sensing experiments. When the extinction coefficient of the red solution of Cu**FL2E** diminishes by 20% of the original value, the solution should be discarded. Do not use the solution after 1 hour, and do not freeze the solution.

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