Certificate of Analysis

Product Name: **Neurosensor 521** **Catalog No.: 5905** **Batch No.: 1**

CAS Number: 1428730-05-5

IUPAC Name: 7-(Diethylamino)-4-(4-methoxyphenyl)-2-oxo-2*H*-1-benzopyran-3-carboxaldehyde

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{21}H_{21}NO_4$

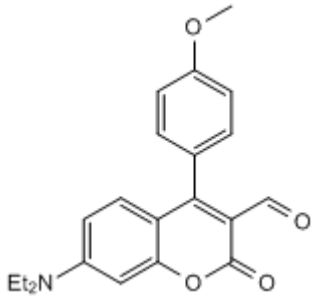
Batch Molecular Weight: 351.4

Physical Appearance: red/orange solid

Solubility: DMSO to 50 mM

Storage: Store at -80°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.4 (Ethyl acetate:Petroleum ether [1:1])

HPLC: Shows 99.8% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	71.78	6.02	3.99
Found	71.61	5.73	4.09

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Product Information

Product Name: **Neurosensor 521** **Catalog No.: 5905** **Batch No.: 1**

CAS Number: 1428730-05-5

IUPAC Name: 7-(Diethylamino)-4-(4-methoxyphenyl)-2-oxo-2*H*-1-benzopyran-3-carboxaldehyde

Description:

Selective noradrenalin and dopamine fluorescent indicator. Exhibits selectivity over adrenalin, glycine and glutamate. Enables visualization of noradrenalin and dopamine in fixed and live cells. Excitation wavelength 488 nm, emission 521 nm.

Physical and Chemical Properties:

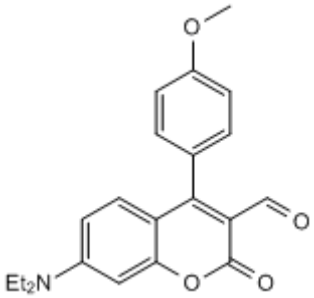
Batch Molecular Formula: $C_{21}H_{21}NO_4$

Batch Molecular Weight: 351.4

Physical Appearance: red/orange solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -80°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Yin *et al* (2017) A two-input fluorescent logic gate for glutamate and zinc. ACS.Chem.Neurosci.. PMID: 28257176.

Hettie *et al* (2013) Selective catecholamine recognition with NeuroSensor 521: a fluorescent sensor for the visualization of norepinephrine in fixed and live cells. ACS Chem.Neurosci. ***4*** 918. PMID: 23527575.

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