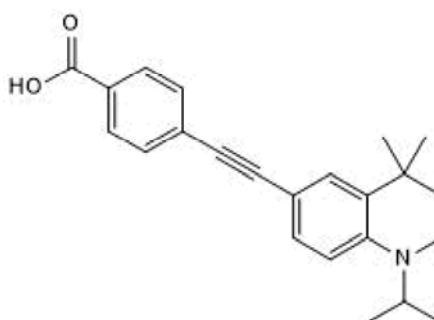


**Product Name:** DC 271  
CAS Number: 198696-03-6

**Catalog No.:** 6873      **Batch No.:** 1

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>23</sub>H<sub>25</sub>NO<sub>2</sub>  
**Batch Molecular Weight:** 347.46  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 50 mM  
ethanol to 10 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 97.7% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 79.51  | 7.25     | 4.03     |
| Found       | 79.14  | 7.32     | 4.13     |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Product Name:** DC 271

**Catalog No.:** 6873

**Batch No.:** 1

CAS Number: 198696-03-6

**Description:**

DC 271 is a fluorescent retinoic acid analog (retinoid all-trans-retinoic acid; ATRA) ( $K_d = 42$  nM at cellular retinoid binding protein II (CRABPII)). Solvchromatic probe: fluorescent  $\lambda_{ex}$ ,  $\lambda_{em}$ , and quantum yield affected by solvent type. Activates same genes as endogenous retinoic acid in human keratinocyte cells (HaCaT) when incubated for 72 h at 1  $\mu$ M. Also elicits cellular responses consistent with those of retinoic acid. Excitation  $\lambda = 351, 350, 382$  and 378 nm in DMSO, EtOH, DCM and Toluene, respectively; emission  $\lambda = 442, 461, 572$  and 447 nm in DMSO, EtOH, DCM and Toluene, respectively. Quantum yield = 19.3, 1.14... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

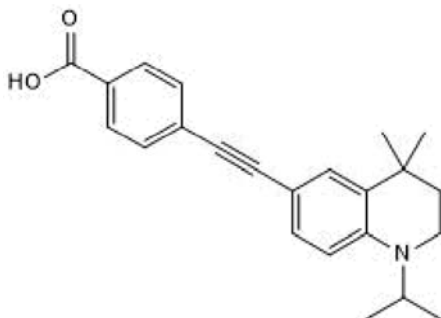
Batch Molecular Formula:  $C_{23}H_{25}NO_2$

Batch Molecular Weight: 347.46

Physical Appearance: Yellow solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



**References:**

**Tomlinson** (2021) Structure-functional relationship of cellular retinoic acid-binding proteins I and II interacting with natural and synthetic ligands. *Acta Crystallogr. D Struct. Biol.* **77** 164. PMID: 33559606.

**Chisholm et al** (2019) Fluorescent retinoic acid analogues as probes for biochemical and intracellular characterization of retinoid signaling pathways. *ACS.Chem.Biol.* **14** 369. PMID: 30707838.

**Tomlinson** (2018) Novel Fluorescence Competition Assay for Retinoic Acid Binding Proteins *ACS.Med.Chem.Lett.* **9** 1297.

**Storage:** Store at  $-20^{\circ}C$

**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

ethanol to 10 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  $45-60^{\circ}C$  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  $-20^{\circ}C$  or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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