Dihydrorhodamine 123

**Item No. 85100**

**CAS Registry No.:** 109244-58-8

**Formal Name:** 2-(3,6-diamino-9H-xanthene-9-yl)-benzoic acid, methyl ester

**Synonym:** DHR 123

**MF:** C_{21}H_{18}N_{2}O_{3}

**FW:** 346.4

**Purity:** ≥98%

**Stability:** ≥2 years at -20°C

**Supplied as:** A crystalline solid

**UV/Vis.:** 223, 289 nm

**Stability:** For long term storage, we suggest that Dihydrorhodamine 123 (DHR 123) be stored as supplied at -20°C. It should be stable for at least two years.

**DHR 123** is supplied as a crystalline solid. A stock solution may be made by dissolving the DHR 123 in the solvent of choice. DHR 123 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of DHR 123 in these solvents is approximately 10 mg/ml.

**DHR 123** is only sparingly soluble in aqueous solutions, it is less than 20 µg/ml in PBS (pH 7.2). Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

**DHR 123** is a cell-permeable fluorogenic probe that is used as an indicator of intracellular peroxynitrite formation. It is oxidized by peroxynitrite to the highly fluorescent product rhodamine **in vitro**. Neither nitric oxide, superoxide, nor hydrogen peroxide alone appear to oxidize DHR 123. Formation of rhodamine can be monitored by fluorescence spectroscopy using excitation and emission wavelengths of 500 and 536 nm, respectively, or by absorbance spectroscopy at 500 nm (ε = 78,800 M⁻¹cm⁻¹). DHR 123 has been used to investigate reactive oxygen intermediates produced by endothelial cells, cosinophils, and reactive microglia.

**References**


**Related Products**

For a list of related products please visit: [www.caymanchem.com/catalog/85100](http://www.caymanchem.com/catalog/85100)

**SAFETY DATA**

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications, and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.