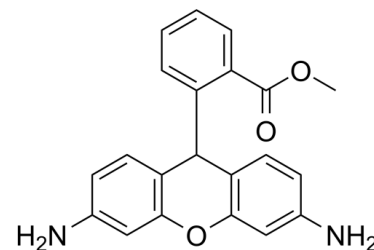


## Data Sheet

<b>Product Name:</b>	Dihydrorhodamine 123
<b>Cat. No.:</b>	CS-7988
<b>CAS No.:</b>	109244-58-8
<b>Molecular Formula:</b>	C <sub>21</sub> H <sub>18</sub> N <sub>2</sub> O <sub>3</sub>
<b>Molecular Weight:</b>	346.38
<b>Target:</b>	Others
<b>Pathway:</b>	Others
<b>Solubility:</b>	DMSO : 100 mg/mL (288.70 mM; Need ultrasonic)



### BIOLOGICAL ACTIVITY:

Dihydrorhodamine 123 is a fluorescent probe ( $\lambda_{\text{ex}}=488$  nm,  $\lambda_{\text{em}}=525$  nm). **In Vitro:** In the presence of 10  $\mu\text{M}$  Dihydrorhodamine 123 (DHR) the stimulation of the neutrophil NADPH oxidase by the addition of 50 nM phorbol 12-myristate 13-acetate (PMA) results in an increase in the rate of rhodamine generation. The fluorescent intensity of the cells, in the presence of 10  $\mu\text{M}$  Dihydrorhodamine 123, increases with time following the addition of 50 nM PMA. In the presence of 10  $\mu\text{M}$  Dihydrorhodamine 123, induced HL60 cells show a sustained increase in fluorescence following the addition of 50 nM PMA<sup>[1]</sup>.

### PROTOCOL (Extracted from published papers and Only for reference)

**Cell Assay:** Dihydrorhodamine 123 is sensitive to the light and air. A stock solution of 2 mM is prepared in dimethylsulfoxide and aliquots are stored under nitrogen at  $-20^{\circ}\text{C}$  in the dark.<sup>[1]</sup> The HL60 cells are incubated at  $6 \times 10^6$  cells/mL in Krebs-Ringer buffer at  $37^{\circ}\text{C}$  containing 10  $\mu\text{M}$  Dihydrorhodamine 123 (DHR). The generation of  $\text{O}_2^-$  is initiated by the addition of 50 nM phorbol 12-myristate 13-acetate (PMA) and the progress of the generation of rhodamine 123 is monitored in 50- $\mu\text{L}$  aliquots ( $3 \times 10^5$  cells) diluted tenfold before analysis. The uninduced HL60 cells are loaded with 5  $\mu\text{M}$  carboxy SNARF-1 AM acetate (SNARF-AM) in the  $\text{Na}^+$  medium for 10 min at  $37^{\circ}\text{C}$  and washed by centrifugation and resuspension to remove unhydrolysed SNARF ester<sup>[1]</sup>.

### References:

[1]. Lydia M. Henderson et al. Dihydrorhodamine 123: a fluorescent probe for superoxide generation? Eur.J.Biochem. 217, 973-980.

### CAIndexNames:

Benzoic acid, 2-(3,6-diamino-9H-xanthen-9-yl)-, methyl ester

### SMILES:

O=C(OC)C1=CC=CC=C1C2C3=C(OC4=C2C=CC(N)=C4)C=C(N)C=C3

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA