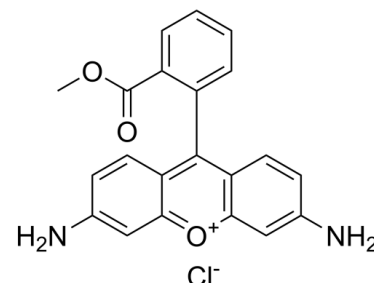


Data Sheet

Product Name:	Rhodamine 123
Cat. No.:	CS-7693
CAS No.:	62669-70-9
Molecular Formula:	C ₂₁ H ₁₇ ClN ₂ O ₃
Molecular Weight:	380.82
Target:	Fluorescent Dye
Pathway:	Others
Solubility:	DMSO : 62.5 mg/mL (164.12 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Rhodamine 123 (RH-123; R-22420) is a fluorescent dye ($\lambda_{\text{ex}}=503$ nm, $\lambda_{\text{em}}=527$ nm). *In Vitro*: The intensity of R123 fluorescence has a peak at concentration of 50 μM , and decreases to zero at higher concentrations due to self-quenching^[1].

PROTOCOL (Extracted from published papers and Only for reference)

Kinase Assay: ^[1]Measurements are made at room temperature with continuous stirring of the mitochondrial suspension using spectrophotometer equipped with a magnetic stirrer with fluorescent cation R123 as probe. Excitation and emission wavelengths are 503 nm and 527 nm, respectively. The incubation medium is the respiration buffer. R123 and sodium pyruvate are added to final concentrations of 50 nM and 10 mM, respectively. Isolated mitochondria maintain a steady membrane potential ($\pm 5\%$) throughout the duration of the recording^[1].

References:

[1]. M. Huang, et al. Mitochondrial Inner Membrane Electrophysiology Assessed by Rhodamine-123 Transport and Fluorescence. *Ann Biomed Eng.* 2007 Jul; 35(7): 1276–1285.

[2]. Emaus, R. K., Grunwald, R., & Lemasters, J. J. (1986). Rhodamine 123 as a probe of transmembrane potential in isolated rat-liver mitochondria: spectral and metabolic properties. *Biochimica et Biophysica Acta (BBA) - Bioenergetics*, 850(3), 436–448.

CAIndexNames:

Xanthylium, 3,6-diamino-9-[2-(methoxycarbonyl)phenyl]-, chloride (1:1)

SMILES:

O=C(C1=CC=CC=C1C2=C3C=CC(N)=CC3=[O+]C4=C2C=CC(N)=C4)OC.[Cl-]

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

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