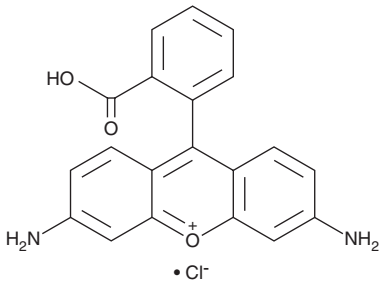
PRODUCT INFORMATION

Rhodamine 110 (chloride)

Item No. 19061

CAS Registry No.: 13558-31-1
Formal Name: 3,6-diamino-9-(2-carboxyphenyl)-xanthylium, monochloride
Synonyms: RH110, Rhodamine 560, Rhodamine N
MF: $C_{20}H_{15}N_2O_3 \bullet Cl$
FW: 366.8
Purity: ≥97%
Ex./Em. Max: 496/520 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Keep cool and dry. Protect from light and moisture.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Rhodamine 110 (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the rhodamine 110 (chloride) in the solvent of choice, which should be purged with an inert gas. Rhodamine 110 (chloride) is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide. Rhodamine 110 (chloride) is slightly soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Rhodamine 110 is a green fluorescent cationic dye with excitation and emission maxima of 496 and 520 nm, respectively.[1] When incorporated with a hydrolytic substrate (*e.g.*, proteinase or peptidase substrates), it can be used as a highly sensitive detection reagent in fluorescence-based enzyme assays.[2] Rhodamine 110 has also been used in a fluorescence quenching method for determining trace nitrite and as a probe for cytochrome P450 activity.[3,4]

References

1. Thatte, H.S., Rhee, J.-H., Zagarins, S.E., *et al.* Acidosis-induced apoptosis in human and porcine heart. *Ann. Thorac. Surg.* **77(4)**, 1376-1383 (2004).
2. Hug, H., Los, M., Hirt, W., *et al.* Rhodamine 110-linked amino acids and peptides as substrates to measure caspase activity upon apoptosis induction in intact cells. *Biochemistry* **38(42)**, 13906-13911 (1999).
3. Zhang, X., Wang, H., Fu, N.-N., *et al.* A fluorescence quenching method for the determination of nitrite with Rhodamine 110. *Spectrochimica Acta. A. Mol. Biomol. Spectrosc.* **59(8)**, 1667-1772 (2003).
4. Yatzeck, M.M., Lavis, L.D., Chao, T.-Y., *et al.* A highly sensitive fluorogenic probe for cytochrome P450 activity in live cells. *Bioorg. Med. Chem. Lett.* **18(22)**, 5864-5866 (2008).

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