

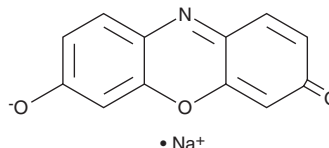
PRODUCT INFORMATION



Resorufin (sodium salt)

Item No. 30789

CAS Registry No.: 34994-50-8
Formal Name: 7-hydroxy-3H-phenoxazin-3-one, monosodium salt
MF: C₁₂H₆NO₃ • Na
FW: 235.2
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 479, 540, 578 nm
Ex./Em. Max: 570/580 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Resorufin (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the resorufin (sodium salt) in the solvent of choice, which should be purged with an inert gas. Resorufin (sodium salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of resorufin (sodium salt) in these solvents is approximately 1 mg/ml. Resorufin (sodium salt) is slightly soluble in ethanol.

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. Organic solvent-free aqueous solutions of resorufin (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of resorufin (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Resorufin is a fluorescent probe and the reduced form of the redox indicator dye resazurin (Item No. 14322).¹ It can be further reduced to hydroresorufin, which is non-fluorescent. Resorufin has been used in the synthesis of resorufin-based fluorescent probes.^{2,3} It has also been used for the direct measurement of solvent-solute hydrogen bond dynamics with distinct absorption and emission peaks in solvents with strong hydrogen bonds and overlapping peaks in solvents with weak hydrogen bonds.⁴ It displays excitation/emission maxima of 570/580 nm, respectively.

References

1. O'Brien, J., Wilson, I., Orton, T., *et al.* Investigation of the Alamar Blue (resazurin) fluorescent dye for the assessment of mammalian cell cytotoxicity. *Eur. J. Biochem.* **267**(17), 5421-5426 (2000).
2. Mayer, R.T., Jermyn, J.W., Burke, M.D., *et al.* Methoxyresorufin as a substrate for the fluorometric assay of insect microsomal O-dealkylases. *Pestic. Biochem. Physiol.* **7**(4), 349-354 (1977).
3. Yoon, J.W., Kim, S., Yoon, Y., *et al.* A resorufin-based fluorescent turn-on probe responsive to nitroreductase activity and its application to bacterial detection. *Dyes Pigm.* **171**, 107779 (2019).
4. Yu, J., Berg, M. Resorufin as a probe for the dynamics of solvation by hydrogen bonding. *Chem. Phys. Lett.* **208**(3-4), 315-320 (1993).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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