

Product Data Sheet

Product Name: Resazurin sodium salt

Cat. No.: GC16113

Chemical Properties

Cas. No. 62758-13-8

Chemical Name sodium 7-oxido-3-oxo-3H-phenoxazine 10-oxide

SMILES O=C1C=C2OC3=CC([O-])=CC=C3[N+]([O-])=C2C=C1.[Na+]

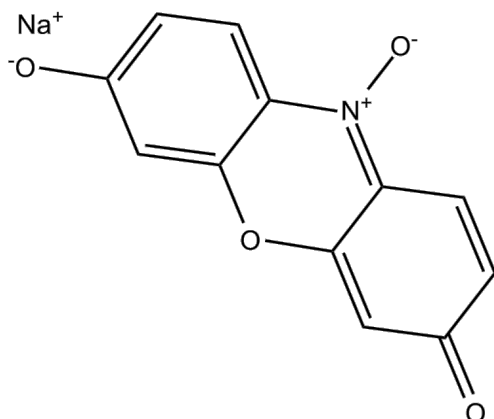
Formula $C_{12}H_6NNaO_4$ M.Wt 251.17

Solubility ≥ 25.1 mg/mL in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Assessment of Cell Viability and Cytotoxicity Using Resazurin Sodium Salt^[1]

This experimental protocol is compiled based on research content and is for reference only; please adjust according to actual needs.

(1) Reagent preparation: Prepare a stock solution (400 μ M) of Resazurin sodium salt in double-distilled water.

(2) Cell seeding: Seed 2–8 $\times 10^3$ viable cells per well in a 96-well standard tissue culture plate (200 μ L/well); incubate overnight at 37°C, 5% CO₂, saturated humidity.

(3) Sample pretreatment: Tap water samples must first be vacuum-filtered through a 0.15 μ m polytetrafluoroethylene (PTFE) microporous membrane to remove particulate matter.

(4) Resazurin sodium salt assay: Add 20 μ L of Resazurin sodium salt solution (final concentration 40 μ M) to each well, return to 37°C, 5% CO₂ for continued incubation, and read fluorescence (Ex=530-560nm, Em=590nm) with a microplate reader at predetermined time points after addition.

Precautions:

(1) Resazurin sodium salt may chemically react with some test compounds; perform a cross-reaction verification in a cell-free system before formal experiments.

(2) The reduction rate of Resazurin sodium salt varies significantly among different cell lines; optimize the Resazurin sodium salt concentration and incubation time to avoid underestimating cell viability.

(3) For your safety and health, wear laboratory coat and disposable gloves during operation.

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. 2000 Sep;267(17):5421-6.

Background

Resazurin sodium salt is a commonly used fluorescent redox indicator (Ex=530-560nm, Em=590nm). Resazurin sodium salt can be reduced by metabolically active cells via mitochondrial and cytosolic oxidoreductases to quantitatively assess cell viability, while serving as a redox indicator for microbial

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

detection. Resazurin sodium salt can be used in studies related to cell proliferation, cytotoxicity, and antimicrobial MIC/MBC evaluation^[1-4].

References:

- [1] Liu F, Ma J, Xiao Y, et al. Development of Resazurin-Based Assay for Rapid Evaluation of Sodium Hypochlorite Tolerance in *Salmonella*. *Foods*. 2026 Mar 20;15(6):1086.
- [2] Rezende N, Ceron Jayme C, Brassesco MS, et al. Standardization of a resazurin-based assay for the evaluation of metabolic activity in oral squamous carcinoma and glioblastoma cells. *Photodiagnosis Photodyn Ther*. 2019 Jun;26:371-374.
- [3] Zhang HX, Du GH, Zhang JT. Assay of mitochondrial functions by resazurin in vitro. *Acta Pharmacol Sin*. 2004 Mar;25(3):385-9.
- [4] Jiang LM, Hoogenkamp MA, van der Sluis LW, et al. Resazurin metabolism assay for root canal disinfectant evaluation on dual-species biofilms. *J Endod*. 2011 Jan;37(1):31-5.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA