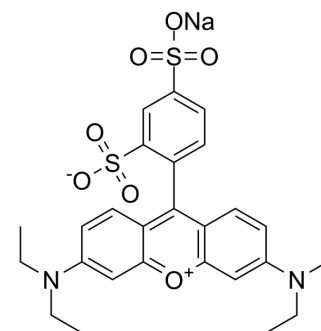


## Sulforhodamine B sodium salt

<b>Cat. No.:</b>	HY-D0974
<b>CAS No.:</b>	3520-42-1
<b>Molecular Formula:</b>	C <sub>27</sub> H <sub>29</sub> N <sub>2</sub> NaO <sub>7</sub> S <sub>2</sub>
<b>Molecular Weight:</b>	580.65
<b>Target:</b>	Fluorescent Dye
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 62.5 mg/mL (107.64 mM; ultrasonic and warming and heat to 60°C)				
	H <sub>2</sub> O : 50 mg/mL (86.11 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	1.7222 mL	8.6110 mL	17.2221 mL
	5 mM	0.3444 mL	1.7222 mL	3.4444 mL	
	10 mM	0.1722 mL	0.8611 mL	1.7222 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (86.11 mM); Clear solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Sulforhodamine B sodium salt is a fluorescent dye with uses spanning from laser-induced fluorescence (LIF) to the quantification of cellular proteins of cultured cells.
<b>In Vitro</b>	Sulforhodamine B (SRB) is often used as a membrane-impermeable polar tracer or used for cell density determination via determination of cellular proteins (cytotoxicity assay). The SRB assay has been used to inexpensively conduct various screening assays to investigate cytotoxicity in cell based studies. This method relies on the property of SRB, which binds stoichiometrically to proteins under mild acidic conditions and then can be extracted using basic conditions; thus, the amount of bound dye can be used as a proxy for cell mass, which can then be extrapolated to measure cell proliferation. The protocol can be divided into four main steps: preparation of treatment, incubation of cells with treatment of choice, cell fixation and SRB staining, and absorbance measurement. This assay is limited to manual or semiautomatic screening, and can be used in an efficient and sensitive manner to test chemotherapeutic drugs or small molecules in adherent cells. It also has applications in evaluating the effects of gene expression modulation (knockdown, gene expression upregulation), as

well as to study the effects of miRNA replacement on cell proliferation<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

### Cell Assay <sup>[1]</sup>

Gently add 25  $\mu$ L (96-well format) or 5  $\mu$ L (384-well format) cold 50% (wt/vol) TCA to each well directly to medium supernatant, and incubate the plates at 4 °C for 1 h. Mixing is not required, as this could lead to some cells detaching from the bottom of the well. Wash the plates four times by submerging the plate in a tub with slow-running tap water and remove excess water by gently tapping the plate into a paper towel. After the last wash allow the plate to air-dry at room temperature. Add 50  $\mu$ L (96-well format) or 20  $\mu$ L (384-well format) of 0.04% (wt/vol) SRB solution to each well. Leave at room temperature for 1 h and then quickly rinse the plates four times with 1% (vol/vol) acetic acid (200  $\mu$ L for 96-well format or 30  $\mu$ L for 384-well format) to remove unbound dye. Allow the plate to air-dry at room temperature<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Adv Mater. 2022 May;34(21):e2200517.
- Mol Pharm. 2024 Apr 15.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Orellana EA, et al. Sulforhodamine B (SRB) Assay in Cell Culture to Investigate Cell Proliferation. Bio Protoc. 2016 Nov 5;6(21). pii: e1984.

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

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