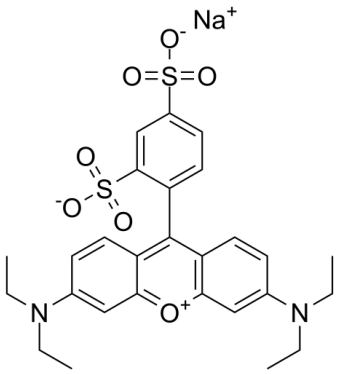
Data Sheet

Product Name:	Sulforhodamine B (sodium salt)
Cat. No.:	CS-7535
CAS No.:	3520-42-1
Molecular Formula:	C27H29N2NaO7S2
Molecular Weight:	580.65
Target:	Others
Pathway:	Others
Solubility:	H2O : 20 mg/mL (34.44 mM; Need ultrasonic); DMSO : 50 mg/mL (86.11 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

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. **In Vitro:** 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[1].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [1]Gently add 25 µL (96-well format) or 5 µL (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 µL (96-well format) or 20 µL (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 µL for 96-well format or 30 µL for 384-well format) to remove unbound dye. Allow the plate to air-dry at room temperature[1].

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.

CAIndexNames:

Xanthylium, 3,6-bis(diethylamino)-9-(2,4-disulfophenyl)-, inner salt, sodium salt (1:1)

SMILES:

O=S(C1=CC=C(C2=C3C=CC(N(CC)CC)=CC3=[O+]C4=C2C=CC(N(CC)CC)=C4)C(S(=O)([O-])=O)=C1)([O-])=O.[Na+]

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

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA