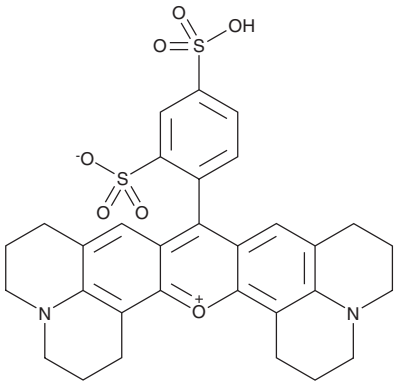
PRODUCT INFORMATION

Sulforhodamine 101

Item No. 16953

CAS Registry No.:	60311-02-6
Formal Name:	9-(2,4-disulfophenyl)-2,3,6,7,12,13,16,17-octahydro-1H,5H,11H,15H-xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-18-ium, inner salt
Synonyms:	SR 101, Sulforhodamine 640
MF:	$C_{31}H_{30}N_2O_7S_2$
FW:	606.7
Purity:	≥95%
UV/Vis.:	λ_{max}: 265, 315, 370, 420, 575 nm
Ex./Em. Max:	586/605 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

Sulforhodamine 101 is supplied as a crystalline solid. A stock solution may be made by dissolving the sulforhodamine 101 in the solvent of choice. Sulforhodamine 101 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of sulforhodamine 101 in these solvents is approximately 1, 25, and 20 mg/ml, respectively.

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 sulforhodamine 101 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sulforhodamine 101 in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day

Description

Sulforhodamine 101 is a nonfixable red fluorescent dye (excitation max: 586 nm; emission max: 605 nm) that can be used as a specific marker for astrocytes and an activity-dependent probe for monitoring regulated exocytosis.[1] It has been reported to induce long-term potentiation of intrinsic neuronal excitability and a long-lasting increase in evoked excitatory postsynaptic potentials in CA1 pyramidal neurons in hippocampal slices.[2]

References

1. Nimmerjahn, A., Kirchhoff, F., Kerr, J.N., *et al.* Sulforhodamine 101 as a specific marker of astroglia in the neocortex *in vivo*. *Nat. Methods* **1(1)**, 31-37 (2004).
2. Kang, J., Kang, N., Yu, Y., *et al.* Sulforhodamine 101 induces long-term potentiation of intrinsic excitability and synaptic efficacy in hippocampal CA1 pyramidal neurons. *Neuroscience* **169(4)**, 1601-1609 (2010).

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