



Rhodamine (11H10): sc-57606

BACKGROUND

Rhodamine comprises a family of fluorone dyes that fluoresce and can be measured easily and inexpensively with fluorimeters. Rhodamine dyes are toxic, and are soluble in water, methanol and ethanol. Rhodamine is commonly used as a tracer in water systems to determine the rate and direction of flow and transport. Rhodamine dyes are synthesized from the condensation of phthalic anhydride with *m*-dialkylaminophenols. Members of the Rhodamine family include Rhodamine B (used in biology as a staining fluorescent dye), Rhodamine 6G (often used in a laser dye because of its high photostability, high quantum yield and low cost) and Rhodamine 123 (used in biochemistry to inhibit mitochondrion function, specifically the electron transport chain, thus slowing down inner respiration). Auramine O is often mixed with Rhodamine B to make an Auramine-Rhodamine stain. This stain is used histologically to see acid-fast bacilli using fluorescence microscopy.

REFERENCES

1. Horobin, R.W. and Murgatroyd, L.B. 1970. The identification and purification of pyronin and Rhodamine dyes. *Stain Technol.* 44: 279-302.
2. Shea, C.R., et al. 1989. Rhodamine dyes as potential agents for photochemotherapy of cancer in human bladder carcinoma cells. *Cancer Res.* 49: 3961-3965.
3. Prevot, P. and Soyer-Gobillard, M.O. 1994. Changes in ATP concentration, mitochondrial structures, and Rhodamine 123 binding in two marine dinoflagellates cultured in the presence of parathion. *J. Eukaryot. Microbiol.* 41: 60-65.
4. Williams, A.J., et al. 2000. A novel system for assigning the mode of inheritance in mitochondrial disorder using cybrids and Rhodamine 6G. *Hum. Mol. Genet.* 8: 1691-1697.
5. Oselin, K., et al. 2003. MDR1 polymorphisms G2677T in exon 21 and C3435T in exon 26 fail to affect Rhodamine 123 efflux in peripheral blood lymphocytes. *Fundam. Clin. Pharmacol.* 17: 463-469.
6. Vogel, R., et al. 2003. Absorption and fluorescence spectroscopy of Rhodamine 6G in titanium dioxide nanocomposites. *Spectrochim. Acta A Mol. Biomol. Spectrosc.* 60: 245-249.
7. Richardson, S.D., et al. 2004. Use of Rhodamine water tracer in the marshland upwelling system. *Ground Water* 42: 678-688.
8. Sethi, S., et al. 2004. Enhanced detection of *Mycobacteria* stained with Rhodamine auramine at 37 degrees C. *Indian J. Pathol. Microbiol.* 46: 521-523.

SOURCE

Rhodamine (11H10) is a mouse monoclonal antibody raised against Rhodamine.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rhodamine (11H10) is recommended for detection of Rhodamine (TRITC) and TAMRA (Rhodamine isomer 5 and 6) by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Rhodamine: 400 Da.

SELECT PRODUCT CITATIONS

1. Grossmann, C., et al. 2006. Activation of NFκB by the latent vFLIP gene of Kaposi's sarcoma-associated herpesvirus is required for the spindle shape of virus-infected endothelial cells and contributes to their proinflammatory phenotype. *J. Virol.* 80: 7179-7185.
2. Liu, Y.Y., et al. 2008. Bacillus Calmette-Guérin and TLR4 agonist prevent cardiovascular hypertrophy and fibrosis by regulating immune microenvironment. *J. Immunol.* 180: 7349-7357.
3. Gokhin, D.S., et al. 2015. Dynamic Actin filaments control the mechanical behavior of the human red blood cell membrane. *Mol. Biol. Cell* 26: 1699-1710.
4. Duan, C.Y., et al. 2019. UA promotes epithelial-mesenchymal transition in peritoneal mesothelial cells. *Mol. Med. Rep.* 20: 2396-2402.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.