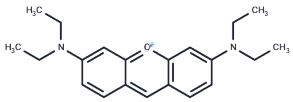
Data Sheet (Cat.No.T19937)

TargetMol

Pyronine B

Chemical Properties



CAS No. : 2150-48-3

Formula: C21H27ClN2O

Molecular Weight: 358.91

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Pyronine B (NSC 44690) is a fluorophore with low relative fluorophore brightness and a small hydrophobic (SH) protein channel inhibitor, which is used for staining of bacteria and mycobacteria and in the spectrophotometric determination of ultra-trace ruthenium.
Targets(IC50)	Autophagy
Cell Research	Instructions I. Dissolution and preparation: Pyronine B is usually provided in powder form and can be dissolved using an appropriate solvent such as dimethylsulfonamide (DMSO) or ethanol. The working concentration of Pyronine B is usually between 1 μM and 10 μM, which can be adjusted according to the specific experimental requirements. For spectrophotometric determination, Pyronine B can be diluted to the required concentration and prepared in an aqueous buffer or solvent. II. Bacterial and fungal staining: 1. Staining procedure: After preparing the working solution of Pyronine B, add it to the bacterial or fungal culture, usually using a concentration of 1-10 μM. 2. Incubate the dye with the cells for 10 to 30 minutes, and the specific time can be optimized according to the desired fluorescence intensity. 3. After staining, excess dye needs to be removed by washing. 4. Fluorescence microscopy observation: 1) Pyronine B emits fluorescence at approximately 570 nm when excited at approximately 535 nm. 2) Since the fluorescence intensity of Pyronine B is relatively low, it is suitable for use in situations where less background fluorescence is required. III. Spectrophotometric determination of ultra-trace ruthenium: 1. Reaction procedure: 1) Mix the Pyronine B solution with the ruthenium sample and adjust the pH as needed (usually in the range of 5-7 for optimal sensitivity). 2) Measure the absorbance of the solution at a specific wavelength (usually around 570 nm) to infer the concentration of ruthenium by the intensity of the complex. Notes 1. Pyronine B should be stored in a cool and dry place and avoid prolonged exposure to light to prevent photodegradation. 2. Pyronine B solution should be stored at -20°C and try to avoid repeated freezing and

Cell Research	thawing. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 10 mg/mL (27.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7862 mL	13.9311 mL	27.8621 mL
5 mM	0.5572 mL	2.7862 mL	5.5724 mL
10 mM	0.2786 mL	1.3931 mL	2.7862 mL
50 mM	0.0557 mL	0.2786 mL	0.5572 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Chen WX, et al. Quick staining technique for myeloperoxidase using potassium iodide and oxidized pyronine B. Acta Histochem. 2014 Jan;116(1):292-6.

Ulusoy Hİ, et al. Determination of ultra trace arsenic species in water samples by hydride generation atomic absorption spectrometry after cloud point extraction. Anal Chim Acta. 2011 Oct 10;703(2):137-44.

Baig JA,et al. Quantification of arsenic in dialysate solution and scalp hair samples of kidney failure patients by cloud point extraction and electrothermal atomic absorption spectroscopy. J AOAC Int. 2012 Nov-Dec;95(6):1755-60.

Li Y,et al. Inhibition of the human respiratory syncytial virus small hydrophobic protein and structural variations in a bicelle environment. J Virol. 2014 Oct;88(20):11899-914.