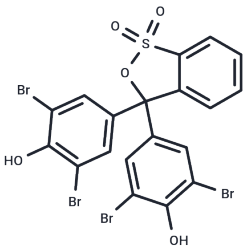
Data Sheet (Cat.No.T21481)

TargetMol

Bromophenol Blue

Chemical Properties



CAS No. : 115-39-9

Formula: C19H10Br4O5S

Molecular Weight: 669.96

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	Bromophenol Blue, an acid phthalein dye, is utilized both as a tracking dye for electrophoresis and as a pH indicator with a transition range of pH 3 to 4.6.
Targets(IC50)	Others
In vitro	Instructions 1. Solvent selection: Bromophenol blue is usually dissolved in water, but can also be dissolved in organic solvents such as ethanol or DMSO depending on the specific experimental needs. 2. Electrophoresis tracking: Bromophenol blue is often used as a tracking dye in gel electrophoresis. It migrates with the sample and helps monitor the progress of the electrophoretic separation process. Concentration: Typical concentrations are 0.01% to 0.1% (w/v). Directions: The dye is mixed with the sample and loaded into the gel. 3. pH indicator: Bromophenol blue is a pH indicator that can change in the pH range of 3.0 to 4.6. It is yellow at low pH and blue at high pH. Directions: Prepare a diluted Bromophenol blue solution for monitoring pH changes in buffers or solutions. Protein detection: Bromophenol blue can be used to detect proteins by binding to the protein, which causes a color change that can be detected by spectrophotometry. 4. Absorption peak: When bound to proteins, Bromophenol blue produces a strong absorption peak at 610 nm. Sensors for chemical detection: Bromophenol blue can also be used as a sensor to detect a variety of compounds such as ammonia, drugs, proteins, and amino acids because it undergoes a color change when bound to these substances. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	H2O: 11 mg/mL (16.42 mM),Sonication is recommended. DMSO: 147 mg/mL (219.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.3 mg/mL (4.93 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4926 mL	7.4631 mL	14.9263 mL
5 mM	0.2985 mL	1.4926 mL	2.9853 mL
10 mM	0.1493 mL	0.7463 mL	1.4926 mL
50 mM	0.0299 mL	0.1493 mL	0.2985 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

Guembe-Garcia M, Magnaghi LR, Biesuz R. Albumin quantification by alternative chemometric-assisted dye-binding methods robust towards pH and ionic strength variations. Spectrochim Acta A Mol Biomol Spectrosc. 2025 Jan 29;332:125821.

Plaza-Joly P,et al. Synergistic Effect of UiO-66 Directly Grown on Kombucha-Derived Bacterial Cellulose for Dye Removal. Molecules. 2024 Jun 27;29(13):3057.

Costa MC, et al. Sugar feeding in triatomines: a new perspective for controlling the transmission of Chagas disease. Front Physiol. 2024 Jun 25;15:1360255. doi: 10.3389/fphys.2024.1360255. Erratum in: Front Physiol. 2024 Oct 16;15:1501103.