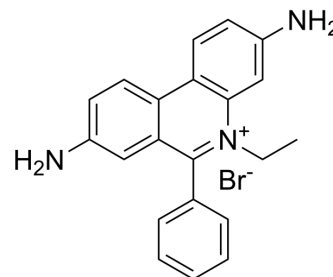


Ethidium bromide

Cat. No.:	HY-D0021
CAS No.:	1239-45-8
Molecular Formula:	C ₂₁ H ₂₀ BrN ₃
Molecular Weight:	394.31
Target:	DNA Stain
Pathway:	Cell Cycle/DNA Damage
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 25 mg/mL (63.40 mM; Need ultrasonic)			
	H ₂ O : < 0.1 mg/mL (ultrasonic) (insoluble)			
		Solvent	Mass	
		Concentration		
Preparing Stock Solutions			1 mg	5 mg
		1 mM	2.5361 mL	12.6804 mL
		5 mM	0.5072 mL	2.5361 mL
	10 mM	0.2536 mL	1.2680 mL	2.5361 mL
Please refer to the solubility information to select the appropriate solvent.				
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: PBS Solubility: 9.09 mg/mL (23.05 mM); Clear solution; Need ultrasonic and warming and heat to 60°C Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (5.28 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.28 mM); Clear solution 			

BIOLOGICAL ACTIVITY

Description	Ethidium bromide is an intercalating agent commonly used as a fluorescent tag (nucleic acid stain) in molecular biology laboratories for techniques such as agarose gel electrophoresis.
In Vitro	<p>Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).</p> <p>?The preparation of agarose gel:</p> <p>?1. Agarose gels are commonly used in concentrations of 0.5% to 2.5% depending on the size of bands needed to be</p>

separated.

?2. Mix the agarose powder with 1X TAE/TBE.

?3. Microwave for 1-3 min until the agarose is completely dissolved (Caution: not overboil).

?4. Make the solution cool down before solidification.

?5. Add ethidium bromide (EtBr) to a final concentration of approximately 0.2-0.5 µg/mL (Stocks are generally 10 mg/ml, and require 5 µL stock/100 mL gel).

?6. Ethidium bromide binds to the DNA and you could visualize the DNA under ultraviolet (UV) light.

?CAUTION: EtBr is a known mutagen. Please pay attention to strengthening protection.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Sci Bull. 2023 Jul 24.
- Sci Total Environ. 2023 Sep 22;167315.
- Free Radic Biol Med. 2024 Mar 15;S0891-5849(24)00137-0.
- J Med Chem. 2024 Feb 8;67(3):2129-2151.
- Int J Mol Sci. 2023, 24(1), 575.

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REFERENCES

[1]. P Stevenson, et al. Comparison of isometamidium chloride and homidium bromide as prophylactic drugs for trypanosomiasis in cattle at Nguruman, Kenya. Acta Trop. 1995 May;59(2):77-84.

[2]. Sabnis, Ram Wasudeo (2010). Handbook of Biological Dyes and Stains: Synthesis and Industrial Application. Hoboken, NJ: Wiley. ISBN 978-0-470-40753-0.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

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