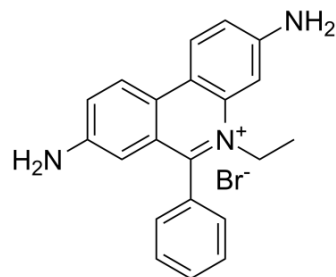


## Ethidium bromide

Cat. No.:	HY-D0021
CAS No.:	1239-45-8
Molecular Formula:	C <sub>21</sub> H <sub>20</sub> BrN <sub>3</sub>
Molecular Weight:	394.31
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	H <sub>2</sub> O : ≥ 100 mg/mL (253.61 mM) DMSO : 41.67 mg/mL (105.68 mM; Need ultrasonic) * "≥" means soluble, but saturation unknown.																										
	<table border="1"> <thead> <tr> <th rowspan="2">Preparing Stock Solutions</th> <th rowspan="2">Solvent Concentration</th> <th colspan="3">Mass</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td></td> <td>1 mM</td> <td>2.5361 mL</td> <td>12.6804 mL</td> <td>25.3608 mL</td> </tr> <tr> <td></td> <td>5 mM</td> <td>0.5072 mL</td> <td>2.5361 mL</td> <td>5.0722 mL</td> </tr> <tr> <td></td> <td>10 mM</td> <td>0.2536 mL</td> <td>1.2680 mL</td> <td>2.5361 mL</td> </tr> </tbody> </table>					Preparing Stock Solutions	Solvent Concentration	Mass			1 mg	5 mg	10 mg		1 mM	2.5361 mL	12.6804 mL	25.3608 mL		5 mM	0.5072 mL	2.5361 mL	5.0722 mL		10 mM	0.2536 mL	1.2680 mL
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Please refer to the solubility information to select the appropriate solvent.																											
In Vivo	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (5.28 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.28 mM); Clear solution</li> </ol>																										

### 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> <ol style="list-style-type: none"> <li>Agarose gels are commonly used in concentrations of 0.5% to 2.5% depending on the size of bands needed to be separated.</li> <li>Mix the agarose powder with 1X TAE/TBE.</li> </ol>

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  $\mu\text{g}/\text{mL}$  (Stocks are generally 10 mg/ml, and require 5  $\mu\text{L}$  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.

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

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