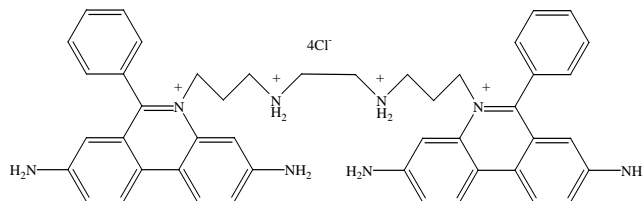


## PRODUCT AND SAFETY DATA SHEET

**PRODUCT NAME:** Ethidium Homodimer 1 (also known as EthD-1, or EtDi)**CATALOG #** 40010**MOLECULAR INFORMATION:** C<sub>46</sub>H<sub>50</sub>Cl<sub>4</sub>N<sub>8</sub>  
MWt: 857  
[61926-22-5]**PROPERTIES:**

**Color & Form** Red solid  
**Purity** ≥95% by TLC  
**Solubility** Soluble in water or DMSO  
**Absorption/Emission** λ<sub>ex</sub>/λ<sub>em</sub> (with DNA) = 528/617nm  
λ<sub>abs</sub> (in H<sub>2</sub>O, no DNA) = 493nm  
**Extinction Coefficient** ≥9,000

**STORAGE AND HANDLING:**

Stored desiccated at 4 °C. Protect from light, especially when in solution.

**APPLICATION:**

Ethidium Homodimer 1 is a high affinity fluorescent nucleic acid stain. It binds to both DNA and RNA in a sequence-independent manner and with a >30-fold fluorescence enhancement. The DNA binding of each Ethidium Homodimer covers four base pairs and is believed to occur by intercalation. Because the dye is highly positively charged, it can not cross cell membranes to stain living cells. However, it is very useful to detect nucleic acids in solution, or detect dead cells with disintegrated cell membranes.

Biotium offers a high purity grade Ethidium Homodimer that is not available from anywhere else. Ethidium Homodimer from other suppliers often contains a high amount (as much as 20%) of inorganic salt.

Ref.: 1) *Biochemistry* **17**, 5078(1978); 2) *Anal. Biochem.* **94**, 259(1979); 3) *Bioorg. Med. Chem.* **3**, 701(1995); 4) *Nucleic Acids Res.* **23**, 2413(1995).

**TOXICITY:**

Unknown

**FIRST AID:**

Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.

**Disclaimer:** Materials from Biotium are sold for research use only, and are not intended for food, drug, household, or cosmetic use. Biotium is not liable for any damage resulting from handling or contact with this product.