

# Product Information

## Ethidium Homodimer-I (EthD-I)

Catalog Number: E4052

Product Size: 1 mg

Application Scope: Nucleic acid staining

### Parameters

Appearance: Red solid soluble in DMSO or MeOH

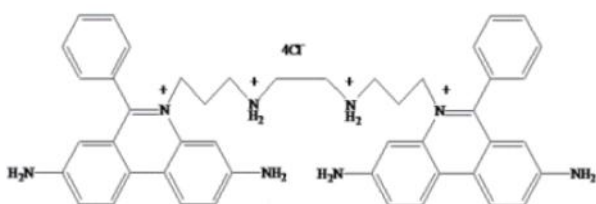
Ex/Em (with DNA): 528/617 nm

Abs (no DNA): 493 nm

Molecular Formula:  $C_{46}H_{50}Cl_4N_8$

Molecular Weight: 857

Molecular Structure:



### Storage

Store at 4°C and protect from light. When stored as directed, product is stable for at least 12 months.

### Description

EthD-I is a high-affinity fluorescent nucleic acid dye that can be used on mammals, bacteria, yeast and fungi. It binds to both DNA and RNA in a sequence-independent manner and with a >30-fold fluorescence enhancement. EthD-I is highly positively charged, it cannot cross cell membranes to stain living cells. It is useful for detecting nucleic acids in solution, or for selectively staining dead cells with damaged plasma membranes.

### Protocol

The optimal concentrations are likely to vary depending on the cell type. The following protocol is for reference only.

1. Preparation of stock solution: The solid dye may be dissolved in DMSO to make concentrated stock solutions of 2mM.
2. Preparation of working solution: Dilute the stock solution with PBS to prepare a working solution with a concentration of 4μM.

Note: The recommended concentration is 0.1-10 μM. Gradient setting is recommended for different cell lines to determine the optimal staining concentration.

3. Add a amount of working solution to cover the sample. Avoid volatilization of dye solution during incubation
4. Incubate cells at room temperature for 30-45 minutes. Staining time can be adjusted appropriately.
5. Image under a fluorescence microscope.

### Notes

1. There are quenching problems with fluorescent dyes. Please avoid light to slow down the fluorescence quenching.
2. For your safety and health, please wear lab coats and disposable gloves.

