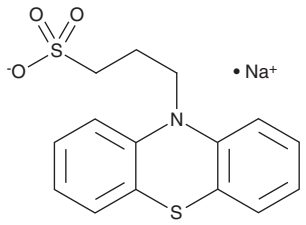
PRODUCT INFORMATION

PTZ-343

Item No. 22908

CAS Registry No.:	101199-38-6
Formal Name:	10H-phenothiazine-10-propanesulfonic acid, monosodium salt
MF:	$C_{15}H_{14}NO_3S_2 \bullet Na$
FW:	343.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 255, 312 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PTZ-343 is supplied as a crystalline solid. A stock solution may be made by dissolving the PTZ-343 in the solvent of choice. PTZ-343 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of PTZ-343 in these solvents is approximately 20 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PTZ-343 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of PTZ-343 in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PTZ-343 is a water-soluble enhancer of luminol (Item No. 16803) chemiluminescent peroxidation catalyzed by horseradish peroxidase (HRP).[1] It acts as an electron transfer mediator, reacting with HRP-II to release HRP and a PTZ-343 radical, which oxidizes luminol anions to induce light emission. HRP-induced chemiluminescent light emission increases by >800% in the presence of PTZ-343. It also enhances soybean peroxidase-induced chemiluminescence, increasing sensitivity and lowering the detection limit from 1.1 to 0.18 pM.[2]

References

1. Marzocchi, E., Grilli, S., Della Ciana, L., *et al.* Chemiluminescent detection systems of horseradish peroxidase employing nucleophilic acylation catalysts. *Anal. Biochem.* **377(2)**, 189-194 (2008).
2. Vdovenko, M.M., Della Ciana, L., and Sakharov, I.Y. 3-(100-Phenothiazinyl)propane-1-sulfonate is a potent enhancer of soybean peroxidase-induced chemiluminescence. *Anal. Biochem.* **392(1)**, 54-58 (2009).

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