Data Sheet (Cat.No.T40607)

TargetMol

2,4,6-Trimethylphenol

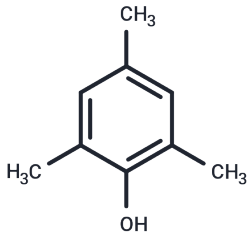
Chemical Properties

CAS No. : 527-60-6

Formula: C9H12O

Molecular Weight: 136.19

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	2,4,6-Trimethylphenol (Mesitol), primarily reacting with organic matter (3 DOM*), is a probe compound that undergoes rapid oxidation by singlet oxygen in aqueous solutions.
Targets(IC50)	Others
In vitro	Peroxidatic substrates, namely catechol (CAT) and 2,4,6-trimethylphenol (TMP) were employed to investigate the chloride-responsive reactions facilitated by chloroperoxidase (CPO). TMP demonstrates consumption exclusively in the presence of chloride ions. While TMP acts as a competitive inhibitor in relation to CAT, the inhibition pattern shifts for CAT in the presence of TMP during chloride-dependent CPO-catalyzed peroxidation reactions. In direct competition studies, the TMP to CAT consumption ratio in the chloride-dependent CPO reaction exhibits an augmentation as the chloride concentration is elevated from 1.0 to 400 mM.[3]

Solubility Information

Solubility	DMSO: 60 mg/mL (440.56 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (14.69 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.3427 mL	36.7134 mL	73.4268 mL
5 mM	1.4685 mL	7.3427 mL	14.6854 mL
10 mM	0.7343 mL	3.6713 mL	7.3427 mL
50 mM	0.1469 mL	0.7343 mL	1.4685 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Rosado-Lausell SL, et al. Roles of singlet oxygen and triplet excited state of dissolved organic matter formed by different organic matters in bacteriophage MS2 inactivation. Water Res. 2013;47(14):4869-4879.
Tratnyek P G,et al. Photo-oxidation of 2, 4, 6-trimethylphenol in aqueous laboratory solutions and natural waters: kinetics of reaction with singlet oxygen. Journal of Photochemistry and Photobiology A: Chemistry, 1994, 84(2): 153-160.
Libby RD, et al. Defining the involvement of HOCl or Cl2 as enzyme-generated intermediates in chloroperoxidase-catalyzed reactions. J Biol Chem. 1992;267(3):1769-1775.