

6-PPD

Chemical Properties

CAS No. : 793-24-8

Formula: C₁₈H₂₄N₂

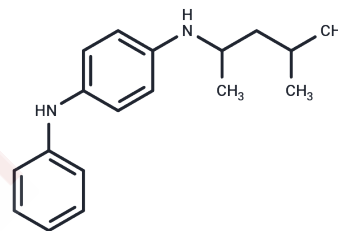
Molecular Weight: 268.4

Keep away from direct sunlight, Keep away from moisture

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	6-PPD (Antioxidant 4020) is an antioxidant that is the most commonly used additive in rubber and enters the environment through large emissions of tire wear particles. 6-PPD can induce neurodegeneration in <i>Caenorhabditis elegans</i> .
Targets(IC50)	Antioxidant, ROS

Solubility Information

Solubility	Ethanol: 10 mg/mL (37.26 mM), Sonication is recommended. DMF: 10 mg/mL (37.26 mM), Sonication is recommended. DMSO: 50 mg/mL (186.29 mM), Sonication is recommended. H ₂ O: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: < 4.17 mg/mL (15.54 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Saline: < 4.17 mg/mL (15.54 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% (20% SBE-β-CD in Saline): < 4.17 mg/mL (15.54 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Corn oil: < 4.17 mg/mL (15.54 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7258 mL	18.6289 mL	37.2578 mL
5 mM	0.7452 mL	3.7258 mL	7.4516 mL
10 mM	0.3726 mL	1.8629 mL	3.7258 mL
50 mM	0.0745 mL	0.3726 mL	0.7452 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

Seiwert, Bettina, et al. Abiotic oxidative transformation of 6-PPD and 6-PPD quinone from tires and occurrence of their products in snow from urban roads and in municipal wastewater. *Water research* 212(2022):118122.

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