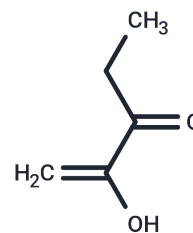


2,3-Pentanedione

Chemical Properties

CAS No. :	600-14-6
Formula:	C ₅ H ₈ O ₂
Molecular Weight:	100.12
Storage:	Pure form: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	2,3-Pentanedione is a food additive that also occurs naturally as a fermentation product in beer, wine and yogurt and is released during the roasting of coffee beans. Inhalation of 2,3-Pentanedione is thought to be the cause of severe respiratory disease in humans, including occlusive bronchitis.
Targets(IC50)	Others

Solubility Information

Solubility	DMSO: 90 mg/mL (898.92 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: 3.3 mg/mL (32.96 mM), Sonication is recommended. <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	9.988 mL	49.9401 mL	99.8801 mL
5 mM	1.9976 mL	9.988 mL	19.976 mL
10 mM	0.9988 mL	4.994 mL	9.988 mL
50 mM	0.1998 mL	0.9988 mL	1.9976 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

Morgan DL, et al. Bronchial and bronchiolar fibrosis in rats exposed to 2,3-pentanedione vapors: implications for bronchiolitis obliterans in humans. *Toxicol Pathol.* 2012;40(3):448-465.

Hubbs AF, et al. Respiratory and olfactory cytotoxicity of inhaled 2,3-pentanedione in Sprague-Dawley rats. *Am J Pathol.* 2012;181(3):829-844.

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