

## Lumichrome

## Chemical Properties

CAS No. :	1086-80-2
Formula:	C <sub>12</sub> H <sub>10</sub> N <sub>4</sub> O <sub>2</sub>
Molecular Weight:	242.233
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	Lumichrome is an endogenous compound in humans, produced by photodegradation of riboflavin. It utilizes a p53-dependent mechanism to inhibit growth and induce apoptosis in human lung cancer cells.
Targets(IC50)	Apoptosis,ERK,NF-κB,Akt,Endogenous Metabolite,p38 MAPK,Wnt/beta-catenin,MDM-2/p53

## Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble) Methanol: < 1 mg/mL (insoluble) 1M NaOH: 1 mg/mL (insoluble) ACN:DMSO (1:1): Slightly soluble H <sub>2</sub> O: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.1283 mL	20.6415 mL	41.2831 mL
5 mM	0.8257 mL	4.1283 mL	8.2566 mL
10 mM	0.4128 mL	2.0642 mL	4.1283 mL
50 mM	0.0826 mL	0.4128 mL	0.8257 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

- Dakora FD, et al. Rhizosphere ecology of lumichrome and riboflavin, two bacterial signal molecules eliciting developmental changes in plants. *Front Plant Sci.* 2015 Sep 14;6:700.
- Matiru VN, et al. The rhizosphere signal molecule lumichrome alters seedling development in both legumes and cereals. *New Phytol.* 2005 May;166(2):439-44.
- Balcazar DE, et al. The superfamily keeps growing: Identification in trypanosomatids of RibJ, the first riboflavin transporter family in protists. *PLoS Negl Trop Dis.* 2017 Apr 13;11(4):e202005513.

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