

Product data sheet



MedKoo Cat#: 563226 Name: pCAME CAS: 19367-38-5 Chemical Formula: C ₁₀ H ₁₀ O ₃ Exact Mass: 178.063 Molecular Weight: 178.187	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

pCAME is an inducer of ectopic tail formation of zebrafish.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	20.0	112.24
DMF:PBS (pH 7.2) (1:5)	0.16	0.90
DMSO	50.0	280.60
Ethanol	5.0	28.06

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	5.61 mL	28.06 mL	56.12 mL
5 mM	0.12 mL	5.61 mL	11.22 mL
10 mM	0.56 mL	2.81 mL	5.61 mL
50 mM	0.01 mL	0.56 mL	0.12 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Zhang HZ, Li CY, Wu JQ, Wang RX, Wei P, Liu MH, He MF. Anti-angiogenic activity of para-coumaric acid methyl ester on HUVECs in vitro and zebrafish in vivo. *Phytomedicine*. 2018 Sep 15;48:10-20. doi: 10.1016/j.phymed.2018.04.056. Epub 2018 May 9. PMID: 30195867.

In vivo study

1. Ameeramja J, Kanagaraj VV, Perumal E. Protocatechuic acid methyl ester modulates fluoride induced pulmonary toxicity in rats. *Food Chem Toxicol*. 2018 Aug;118:235-244. doi: 10.1016/j.fct.2018.05.031. Epub 2018 May 11. PMID: 29758312.

7. Bioactivity

Biological target:

(E)-Methyl 4-coumarate (Methyl 4-hydroxycinnamate), found in several plants, such as *Allium cepa* or *Morinda citrifolia* L. leaves. (E)-Methyl 4-coumarate cooperates with Carnosic Acid in inducing apoptosis and killing acute myeloid leukemia cells, but not normal peripheral blood mononuclear cells.

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In vitro activity

pCAME could inhibit the proliferation, wound healing, migration and tube formation of HUVECs, disrupt the physiological formation of intersegmental vessels (ISVs) and the subintestinal vessels (SIVs) of zebrafish embryos, and inhibit tumor angiogenesis in the zebrafish cell-line derived xenograft (zCDX) model of SGC-7901 in a dose-dependent manner.

Reference: Phytomedicine. 2018 Sep 15;48:10-20. <https://pubmed.ncbi.nlm.nih.gov/30195867/>

In vivo activity

Hence, the present study is aimed to determine the protective effect of PCAME against F- induced pulmonary toxicity in female albino Wistar rats. The animals were treated with sodium fluoride (NaF, 300 ppm in drinking water ad libitum) alone or in combination with PCAME (25 or 50 mg/kg bw/day by oral intubation) for 60 days and analyzed for changes in lung histology, oxidative stress, inflammation, apoptosis and fibrosis markers. PCAME supplementation prevented the F- induced changes in the above markers. Also, altered serum and bronchoalveolar lavage fluid markers and lung histoarchitecture were also restored by PCAME. F- induced modulations in oxidative stress markers, TUNEL positive cells and mRNA levels of inflammatory genes further normalized by PCAME in lung tissues. These results revealed that PCAME effectively attenuated the F- induced changes in the rat lungs by reducing cellular F- accumulation and enhancing antioxidants level.

Reference: Food Chem Toxicol. 2018 Aug;118:235-244. <https://pubmed.ncbi.nlm.nih.gov/29758312/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.