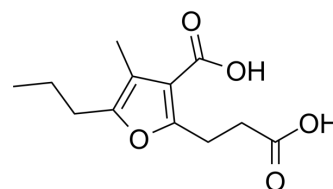


## CMPF

<b>Cat. No.:</b>	HY-129297		
<b>CAS No.:</b>	86879-39-2		
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>16</sub> O <sub>5</sub>		
<b>Molecular Weight:</b>	240.25		
<b>Target:</b>	Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



## SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 250 mg/mL (1040.58 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	4.1623 mL	20.8117 mL	41.6233 mL
		5 mM	0.8325 mL	4.1623 mL	8.3247 mL
10 mM		0.4162 mL	2.0812 mL	4.1623 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (10.41 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (10.41 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (10.41 mM); Clear solution</li> </ol>				

## BIOLOGICAL ACTIVITY

<b>Description</b>	CMPF can be found in trace constituent of urine and blood. CMPF is a biomarker of type 2 diabetes. CMPF can act on the β cell and induces impaired mitochondrial function. CMPF decreases glucose-induced ATP accumulation, and induces oxidative stress. CMPF reverses hepatic lipid accumulation and improves insulin sensitivity in obese mice <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Human Endogenous Metabolite

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## REFERENCES

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- [1]. Prentice KJ, et al. The furan fatty acid metabolite CMPF is elevated in diabetes and induces  $\beta$  cell dysfunction. *Cell Metab.* 2014 Apr 1;19(4):653-66.
- [2]. Prentice KJ, et al. CMPF, a Metabolite Formed Upon Prescription Omega-3-Acid Ethyl Ester Supplementation, Prevents and Reverses Steatosis. *EBioMedicine.* 2018 Jan;27:200-213.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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