



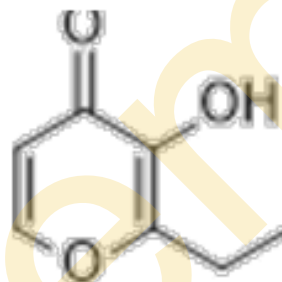
Phones: +381 63 658 074 / +381 64 27 54 268

Email: info@decachem.com

TECHNICAL DATA SHEET

Ethyl maltol

Cat. No.:	HY-W010320												
CAS No.:	4940-11-8												
Molecular Formula:	C ₇ H ₉ O ₃												
Molecular Weight:	140.14												
Target:	Heme oxygenase (HO)												
Pathway:	Metabolic Enzyme/Protease												
Storage:	<table border="0"> <tr> <td>Powder</td> <td>-20°C</td> <td>3 years</td> </tr> <tr> <td></td> <td>4°C</td> <td>2 years</td> </tr> <tr> <td>In solvent</td> <td>-80°C</td> <td>6 months</td> </tr> <tr> <td></td> <td>-20°C</td> <td>1 month</td> </tr> </table>	Powder	-20°C	3 years		4°C	2 years	In solvent	-80°C	6 months		-20°C	1 month
Powder	-20°C	3 years											
	4°C	2 years											
In solvent	-80°C	6 months											
	-20°C	1 month											



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (713.57 mM; Need ultrasonic)																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>7.1357 mL</td> <td>35.6786 mL</td> <td>71.3572 mL</td> </tr> <tr> <td>5 mM</td> <td>1.4271 mL</td> <td>7.1357 mL</td> <td>14.2714 mL</td> </tr> <tr> <td>10 mM</td> <td>0.7136 mL</td> <td>3.5679 mL</td> <td>7.1357 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	7.1357 mL	35.6786 mL	71.3572 mL	5 mM	1.4271 mL	7.1357 mL	14.2714 mL	10 mM	0.7136 mL	3.5679 mL	7.1357 mL
Solvent	Mass			Concentration																		
		1 mg	5 mg	10 mg																		
Preparing Stock Solutions	1 mM	7.1357 mL	35.6786 mL	71.3572 mL																		
	5 mM	1.4271 mL	7.1357 mL	14.2714 mL																		
	10 mM	0.7136 mL	3.5679 mL	7.1357 mL																		
	Please refer to the solubility information to select the appropriate solvent.																					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (14.84 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (14.84 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (14.84 mM); Clear solution 																					

BIOLOGICAL ACTIVITY

Description	Ethyl maltol (2-Ethyl-3-hydroxy-4H-pyran-4-one) is an orally active and important food additive and flavor enhancer. Ethyl maltol is less toxic to rats and dogs. Ethyl maltol can enhance copper-mediated cytotoxicity and induce apoptosis in lung epithelial cells ^{[1][2][3][4]} .
In Vitro	Ethyl maltol (3 mM; 24 h) induces cell apoptosis and leads to oxidative stress and DNA damage in copper treated lung epithelial cells ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

DECACHEM DOO, Novi Sad, Serbia

Address: Lozionicka 14/9, 21000 Novi Sad, Serbia ;
PIB: 113353206 Matični broj: 21851396

[Http://www.decachem.com](http://www.decachem.com)



Phones: +381 63 658 074 / +381 64 27 54 268

Email: info@decachem.com

	Western Blot Analysis^[1]
Cell Line:	Cu treated Calu-6 cells
Concentration:	3 mM
Incubation Time:	24 h
Result:	Increased pATM phosphorylation level.
	Real Time qPCR^[1]
Cell Line:	Cu treated Calu-6 cells
Concentration:	3 mM
Incubation Time:	24 h
Result:	Increased the expression of ferritin light chain and hemoxygenase.
In Vivo	Ethyl maltol (oral administration; 50-1000 mg/kg; 90 days-2 years) is safe in rats and dogs, and the toxicity (such as liver and kidney function impairment, hemolysis) is less than the homolog maltol ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.