

Tea polyphenol

Cat. No.:	HY-N1925		
CAS No.:	84650-60-2		
Target:	Apoptosis; Autophagy		
Pathway:	Apoptosis; Autophagy		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month

Tea polyphenol

SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 50 mg/mL (Need ultrasonic) DMSO : 32.5 mg/mL (Need ultrasonic)
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 3.25 mg/mL (Infinity mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 3.25 mg/mL (Infinity mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Tea polyphenol is the floorboard of phenolic compounds in tea. Tea polyphenol exhibits biological activity including antioxidant and anti-cancer activities, inhibition of cell proliferation, induction of apoptosis, cell cycle arrest and modulation of carcinogen metabolism ^[1] .									
In Vivo	<p>Tea polyphenol (400 mg/(kg·d) in diet for eight weeks) lowers serum glucose and blood lipids in diabetic cardiomyopathy model rats^[1].</p> <p>Tea polyphenol (400 mg/(kg·d) in diet) improves spatial cognitive abilities in rats with chronic cerebral hypoperfusion^[5].</p> <p>Tea polyphenol (5-20mg/kg, p.o., for 7days) shows antidepressant-like effects in mice following the forced swimming test (FST) and tail suspension test (TST)^[6].</p> <p>Tea polyphenol (100-400 mg/kg in diet per day) protects mice from Acetaminophen (HY-66005)-induced hepatotoxicity by reducing CYP2E1 and CYP1A2 expression in mice^[7].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Diabetic cardiomyopathy model rats^[1]</td> </tr> <tr> <td>Dosage:</td> <td>400 mg/(kg·d)</td> </tr> <tr> <td>Administration:</td> <td>in diet for eight weeks</td> </tr> <tr> <td>Result:</td> <td>Lowers serum glucose and blood lipids.</td> </tr> </table>		Animal Model:	Diabetic cardiomyopathy model rats ^[1]	Dosage:	400 mg/(kg·d)	Administration:	in diet for eight weeks	Result:	Lowers serum glucose and blood lipids.
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Dosage:	400 mg/(kg·d)									
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Improved myocardial structure and function.
Induced autophagy in rats in a high-fat state (Increased level of Beclin-1 and the ratio of LC3-II to LC3-I).

REFERENCES

- [1]. Xu Y, et al. Green tea polyphenols inhibit cognitive impairment induced by chronic cerebral hypoperfusion via modulating oxidative stress. *J Nutr Biochem*. 2010 Aug;21(8):741-8.
- [2]. Zhu WL, et al. Green tea polyphenols produce antidepressant-like effects in adult mice. *Pharmacol Res*. 2012 Jan;65(1):74-80.
- [3]. Chen X, et al. Protective effect of tea polyphenols against paracetamol-induced hepatotoxicity in mice is significantly correlated with cytochrome P450 suppression. *World J Gastroenterol*. 2009 Apr 21;15(15):1829-35.
- [4]. Suzuki J, et al. Tea polyphenols regulate key mediators on inflammatory cardiovascular diseases. *Mediators Inflamm*. 2009;2009:494928.
- [5]. Chen D, et al. Tea polyphenols, their biological effects and potential molecular targets. *Histol Histopathol*. 2008 Apr;23(4):487-96.
- [6]. Mao X, et al. Oxidative stress-induced diseases and tea polyphenols. *Oncotarget*. 2017 Sep 14;8(46):81649-81661.
- [7]. Hui Zhou, et al. Regulation of autophagy by tea polyphenols in diabetic cardiomyopathy. *J Zhejiang Univ Sci B*. 2018 May;19(5):333-341.
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Caution: Product has not been fully validated for medical applications. For research use only.

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