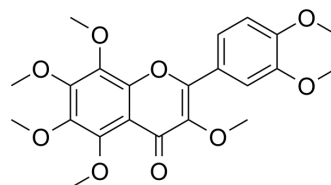


3,5,6,7,8,3',4'-Heptemthoxyflavone

Cat. No.:	HY-N2038
CAS No.:	1178-24-1
Molecular Formula:	C ₂₂ H ₂₄ O ₉
Molecular Weight:	432.42
Target:	Phosphodiesterase (PDE)
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (115.63 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	2.3126 mL	11.5628 mL	23.1257 mL
				5 mM	0.4625 mL	2.3126 mL	4.6251 mL
				10 mM	0.2313 mL	1.1563 mL	2.3126 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (5.78 mM); Suspended solution; Need ultrasonic						
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.78 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description	3,5,6,7,8,3',4'-Heptemthoxyflavone, a flavonoid from satsuma peel, is an orally available CREB activator with anti-tumor and anti-neuroinflammatory activity. 3,5,6,7,8,3',4'-Heptemthoxyflavone inhibits collagenase activity and increases the content of type I procollagen in human dermal fibroblast neoblast (HDFn) cells. 3,5,6,7,8,3',4'-Heptemthoxyflavone induces brain-derived neurotrophic factor (BDNF) expression through the cAMP/ERK/CREB signaling pathway and reduces phosphodiesterase activity in C6 glioma ^{[1][2][3][4][5]} .
In Vitro	3,5,6,7,8,3',4'-Heptemthoxyflavone (HMF) (50-400 µg/mL; 24 h) does not affect neonatal human dermal fibroblasts at concentrations <200 µg/mL (HDFn) cell viability ^[1] . 3,5,6,7,8,3',4'-Heptemthoxyflavone (50-200 µg/mL; 24 h) significantly increases type I procollagen content of HDFn cells in a dose-dependent manner. and downregulates the expression of MMP-1, while upregulating the expression of type I procollagen in UV-induced HDFn cells ^[1] .

	<p>3,5,6,7,8,3',4'-Heptemthoxyflavone (HMF) (10 μM; 48 h) can activate ERK and cAMP response element binding protein (CREB), inhibit the activities of PDE4B and PDE4D, and increase cAMP levels in C6 glioma cell^[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>3, 5, 6, 7, 8, 3', 4'- Heptemthoxyflavone (HPT) (0.025% w/v; po, in water; 2 weeks before tumor induction) inhibits NOR1/TPA-induced tumor promotion in mice^[2]. 3, 5, 6, 7, 8, 3', 4'- Heptemthoxyflavone (HMF) (50 mg/kg, 100 mg/kg; po; once daily for 15 days) also exerts neuroprotective effects by enhancing the expression of BDNF in astrocyte in Corticosterone (HY-B1618)-induced depression-like mouse model^[5]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Kim HI, et al. 3,5,6,7,8,3',4'-Heptamethoxyflavone, a Citrus Flavonoid, Inhibits Collagenase Activity and Induces Type I Procollagen Synthesis in HDFn Cells. *Int J Mol Sci.* 2018 Feb 22;19(2).
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- [3]. Adhikari-Devkota A, et al. Anti-neuroinflammatory activities of extract and polymethoxyflavonoids from immature fruit peels of Citrus 'Hebesu'. *J Food Biochem.* 2019 Jun;43(6):e12813.
- [4]. Sawamoto A, et al. Citrus flavonoid 3,5,6,7,8,3',4'-heptamethoxyflavone induces BDNF via cAMP/ERK/CREB signaling and reduces phosphodiesterase activity in C6 cells. *Pharmacol Rep.* 2019 Aug;71(4):653-658.
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Caution: Product has not been fully validated for medical applications. For research use only.

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