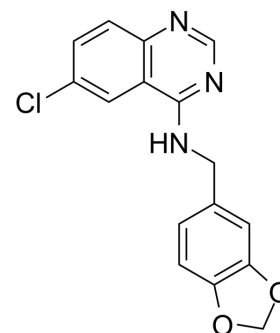


MBCQ

Cat. No.:	HY-114672
CAS No.:	150450-53-6
Molecular Formula:	C ₁₆ H ₁₂ ClN ₃ O ₂
Molecular Weight:	313.74
Target:	Phosphodiesterase (PDE)
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (318.74 mM; Need ultrasonic)					
	Preparing Stock Solutions	<div><div>Solvent</div><div>Concentration</div></div>	Mass	1 mg	5 mg	10 mg
		1 mM		3.1874 mL	15.9368 mL	31.8735 mL
		5 mM		0.6375 mL	3.1874 mL	6.3747 mL
		10 mM		0.3187 mL	1.5937 mL	3.1874 mL
	Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.97 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	MBCQ is a potent and selective cGMP-specific phosphodiesterase (PDE V; PDE5) inhibitor with an IC ₅₀ of 19 nM. MBCQ lacks inhibitory activity toward other PDE isozymes (all IC ₅₀ s>100 μM). MBCQ dilates coronary arteries via specific inhibition of cGMP-PDE ^{[1][2][3]} .			
IC ₅₀ & Target	PDE V 19 nM (IC ₅₀)	PDE ⌘ >100 μM (IC ₅₀)	PDE ⌘ >100 μM (IC ₅₀)	PDE ⌘ >100 μM (IC ₅₀)
	PDE ⌘ >100 μM (IC ₅₀)			
In Vitro	MBCQ (compound 3d) induces relaxation of isolated porcine coronary arteries precontracted with prostaglandin F _{2α} (PGF ₂ α; EC ₅₀ =190 nM) ^[1] . MBCQ (0.01-10 μM; 10 min) inhibits Carbachol (10 μM)-induced contractions in a concentration-dependent manner in rat			

ileal smooth muscle^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Y Takase, et al. Cyclic GMP phosphodiesterase inhibitors. 2. Requirement of 6-substitution of quinazoline derivatives for potent and selective inhibitory activity. J Med Chem. 1994 Jun 24;37(13):2106-11.
- [2]. Jeffery D MacPherson, et al. Inhibition of phosphodiesterase 5 selectively reverses nitrate tolerance in the venous circulation J Pharmacol Exp Ther. 2006 Apr;317(1):188-95.
- [3]. Takeharu Kaneda, et al. Lack of cyclic nucleotide regulation of MBCQ-induced relaxation of rat ileal smooth muscle. J Smooth Muscle Res. 2003 Jun;39(3):47-54.
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Caution: Product has not been fully validated for medical applications. For research use only.

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