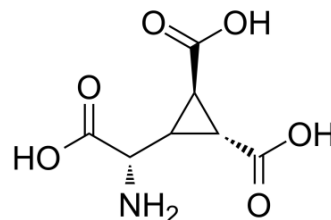


DCG-IV

Cat. No.:	HY-101335
CAS No.:	147782-19-2
Molecular Formula:	C ₇ H ₉ NO ₆
Molecular Weight:	203.15
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	DCG-IV is a potent agonist of group II mGluRs with EC ₅₀ s of 0.35 and 0.09 μM for mGlu2R and mGlu3R, respectively. DCG-IV is also a competitive antagonist at group I (IC ₅₀ : mGlu1R/5R=389/630 μM) and III receptors (IC ₅₀ : mGlu4R/6R/7R/8R=22.5/39.6/40.1/32 μM). DCG-IV has anticonvulsive and neuroprotective effects ^{[1][2]} .			
IC₅₀ & Target	mGlu2R 0.35 μM (EC ₅₀)	mGlu3R 0.09 μM (EC ₅₀)	mGlu1R 389 μM (IC ₅₀)	mGlu5 630 μM (IC ₅₀)
	mGlu4R 22.5 μM (IC ₅₀)	mGlu6 39.6 μM (IC ₅₀)	mGlu7 40.1 μM (IC ₅₀)	mGlu8 32 μM (IC ₅₀)
In Vitro	DCG-IV is also an NMDA receptor agonist in the rat cortical slice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
In Vivo	DCG-IV (1-10 mg/kg; i.p.) depresses the phencyclidine (PCP)-induced hyperlocomotion ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
	Animal Model:	Male ICR mice weighing about 40 g (PCP-induced locomotor activity) ^[4]		
	Dosage:	10, 5, or 1 mg/kg		
	Administration:	i.p.		
	Result:	Reduced spontaneous activities of the animals at 10 or 5 mg/kg.		

REFERENCES

- [1]. Brabet I, et al. Comparative effect of L-CCG-I, DCG-IV and gamma-carboxy-L-glutamate on all cloned metabotropic glutamate receptor subtypes. *Neuropharmacology*. 1998 Aug;37(8):1043-51.
- [2]. Bertrand HO, et al. Common and selective molecular determinants involved in metabotropic glutamate receptor agonist activity. *J Med Chem*. 2002 Jul 18;45(15):3171-83.
- [3]. Uyama Y, et al. DCG-IV, a potent metabotropic glutamate receptor agonist, as an NMDA receptor agonist in the rat cortical slice. *Brain Res*. 1997 Mar 28;752(1-2):327-30.

[4]. Tomita N, et al. The effects of DCG-IV and L-CCG-1 upon phencyclidine (PCP)-induced locomotion and behavioral changes in mice. Ann N Y Acad Sci. 2000 Sep;914:284-91.

Caution: Product has not been fully validated for medical applications. For research use only.

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