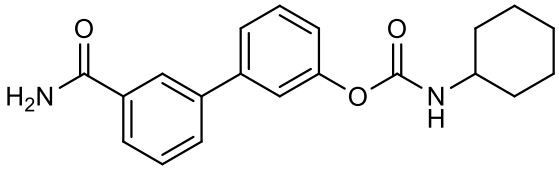
Catalog # 10-1301

URB-597

546141-08-6

Cyclohexylcarbamic acid 3'-(aminocarbonyl)-[1,1'-biphenyl]-3-yl ester

Lot # X101223



Potent and selective fatty acid amide hydrolase (FAAH) inhibitor, IC_{50} = 3-5 nM.[1] Produces cannabinoid CB1 and CB2 receptor-mediated analgesia in inflammatory pain states without causing side effects associated with cannabinoid receptor activation.[2] Attenuates the anxiolytic-like effect of acetaminophen in a mouse model.[3] Exerts anti-inflammatory effects in rat hippocampus and ameliorates age-related deficits.[4] Off target effects: Reduces tyrosine hydroxylase expression.[5] Improves cognitive impairment caused by chronic cerebral hypoperfusion in a mouse model via inhibition of mTOR-dependent autophagy.[6]

1) Piomelli *et al*. (2006), *Pharmacological profile of the selective FAAH inhibitor KDS-4103 (URB597)*; CNS Drugs Rev., **12** 21
2) Jayamanne *et al*. (2006), *Actions of the FAAH inhibitor URB597 in neuropathic and inflammatory chronic pain models*; Br. J. Pharmacol., **147** 281
3) Zaitone *et al*. (2012), *Inhibition of fatty acid amide hydrolase by URB597 attenuates the anxiolytic-like effect of acetaminophen in the mouse elevated plus-maze test*; Behav. Pharmacol., **23** 417
4) Murphy *et al*. (2012), *The fatty acid amide hydrolase inhibitor URB597 exerts anti-inflammatory effects in hippocampus of aged rats and restores an age-related deficit in long-term potentiation*; Neuroinflammation, **9** 79
5) Bosier *et al*. (2013), *The FAAH inhibitor URB597 efficiently reduces tyrosine hydroxylase expression through CB- and FAAH-independent mechanisms*; Br. J. Pharmacol., **169** 794
6) Wang *et.al.* (2017), *URB597 improves cognitive impairment induced by chronic cerebral hypoperfusion by inhibiting mTOR-dependent autophagy*; Neuroscience **344** 293

PHYSICAL DATA

Molecular Weight:	338.41
Molecular Formula:	$C_{20}H_{22}N_2O_3$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 15 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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