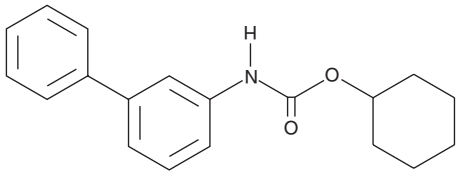
PRODUCT INFORMATION

URB602

Item No. 10007457

CAS Registry No.:	565460-15-3
Formal Name:	N-[1,1'-biphenyl]-3-yl-carbamic acid, cyclohexyl ester
MF:	$C_{19}H_{21}NO_2$
FW:	295.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 236 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

URB602 is supplied as a crystalline solid. A stock solution may be made by dissolving the URB602 in the solvent of choice, which should be purged with an inert gas. URB602 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of URB602 in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

URB602 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, URB602 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. URB602 has a solubility of approximately 0.25 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

URB602 is a selective inhibitor of monoacylglycerol lipase (MAGL), exhibiting an IC_{50} value of 28 µM for the rat brain enzyme.[1] It does not inhibit fatty acid amide hydrolase (FAAH) at concentrations up to 100 µM or other lipid metabolizing enzymes such as diacylglycerol lipase or COX-2.[1,2] Inhibition of MAGL inhibits 2-arachidonoyl glycerol (Item No. 62160) hydrolysis, which is associated with enhanced stress-induced analgesia and may represent a novel drug target in pain and stress management.[1] URB602 (50 µM) also inhibits glucose-stimulated and depolarization-induced insulin secretion in INS-1 cells.[3]

References

1. Hohmann, A.G., Suplita, R.L., Bolton, N.M., *et al.* An endocannabinoid mechanism for stress-induced analgesia. *Nature* **435(7045)**, 1108-1112 (2005).
2. Tarzia, G., Duranti, A., Tontini, A., *et al.* Design, synthesis, and structure-activity relationships of alkylcarbamic acid aryl esters, a new class of fatty acid amide hydrolase inhibitors. *J. Med. Chem.* **46(12)**, 2352-2360 (2003).
3. Berdan, C.S., Erion, K.A., Burritt, N.E., *et al.* Inhibition of monoacylglycerol lipase activity decreases glucose-stimulated insulin secretion in INS-1 (832/13) cells and rat islets. *PLoS One* **11(2)**, e0149008 (2016).

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