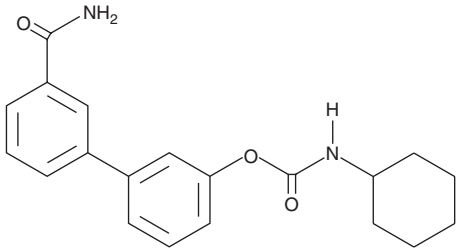
PRODUCT INFORMATION

URB597

Item No. 10046

CAS Registry No.: 546141-08-6
Formal Name: (3'-(aminocarbonyl)[1,1'-biphenyl]-3-yl)-cyclohexylcarbamate
MF: $C_{20}H_{22}N_2O_3$
FW: 338.4
Purity: ≥98%
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

URB597 is supplied as a crystalline solid. A stock solution may be made by dissolving the URB597 in the solvent of choice, which should be purged with an inert gas. URB597 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of URB597 in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

URB597 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, URB597 should first be dissolved in DMSO or DMF and then diluted with the aqueous buffer of choice. URB597 has a solubility of approximately 500 µg/ml in DMSO in a 1:2 solution of DMSO:PBS (pH 7.2) and approximately 500 µg/ml in DMF in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

URB597 is a potent and selective inhibitor of fatty acid amide hydrolase (FAAH), the enzyme that hydrolyzes anandamide (AEA; Item No. 90050) and other simple esters and amides with long unsaturated acyl chains (IC_{50} = 4.6 nM and 0.5 nM in brain membranes and intact neurons, respectively).[1,2] URB597 exhibits both antinociceptive and anxiolytic effects *in vivo* without evoking other symptoms associated with cannabinoid-like compounds. This antinociceptive effect is similar to those observed in $FAAH^{(-/-)}$ mice.[3]

References

1. Kathuria, S., Gaetani, S., Fegley, D., *et al.* Modulation of anxiety through blockade of anandamide hydrolysis. *Nature Med.* **1(9)**, 76-81 (2003).
2. Cravatt, B.F., Demarest, K., Patricelli, M.P., *et al.* Supersensitivity to anandamide and enhanced endogenous cannabinoid signaling in mice lacking fatty acid amide hydrolase. *Proc. Natl. Acad. Sci. USA* **98(16)**, 9371-9376 (2001).
3. Cravatt, B.F., Giang, D.K., Mayfield, S.P., *et al*. Molecular characterization of an enzyme that degrades neuromodulatory fatty-acid amides. *Nature* **384**, 83-87 (1996).

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