

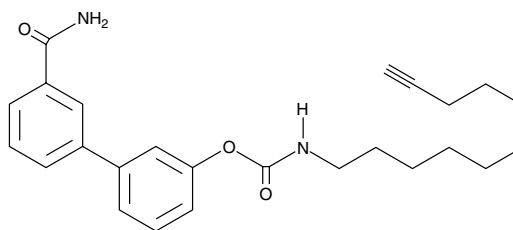
Product Information



JP104

Item No. 10008661

CAS Registry No.: 887264-45-1
Formal Name: 3'-carbamoyl-biphenyl-3-yl-undecynecarbamate
Synonym: Click Tag™ JP104
MF: C₂₅H₃₀N₂O₃
FW: 406.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that JP104 be stored as supplied at -20°C. It should be stable for at least two years.

JP104 is supplied as a crystalline solid. A stock solution may be made by dissolving the JP104 in an organic solvent purged with an inert gas. JP104 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of JP104 in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

JP104 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, JP104 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. JP104 has a solubility of approximately 0.25 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The enzyme, fatty acid amide hydrolase (FAAH), is widely expressed in brain and other tissues, and is capable of hydrolyzing anandamide (AEA) and other simple esters and amides with long unsaturated acyl chains.¹ JP104 is an irreversible FAAH inhibitor of the carbamate class with an IC₅₀ of 7.3 nM for the human recombinant enzyme when tested using radiolabeled oleamide as the substrate.² The alkyl derivative on JP104 reacts with azide-modified reporter tags, such as azido-rhodamine or azido-biotin, for visualization of JP104 bound to FAAH *in vivo*.

References

1. Zhang, Y.H., Zhang, G.Y., Mollat, P., *et al.* Purification, characterization, and cellular localization of the 100-kDa human placental GTPase-activating protein. *J. Biol. Chem.* **268**, 18875-18881 (1993).
2. Alexander, J.P. and Cravatt, B.F. Mechanism of carbamate inactivation of FAAH: Implications for the design of covalent inhibitors and *in vivo* functional probes for enzymes. *Chemistry & Biology* **12**, 1179-1187 (2005).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10008661

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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