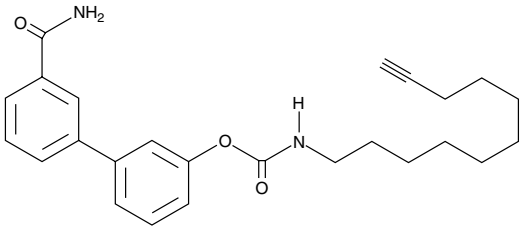
Product Information

JP104

Item No. 10008661

CAS Registry No.: 887264-45-1
Formal Name: 3'-carbamoyl-biphenyl-3-yl-undecynecarbamate
Synonym: Click Tag™ JP104
MF: $C_{25}H_{30}N_2O_3$
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 IC_{50} 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 carbmate 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

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com