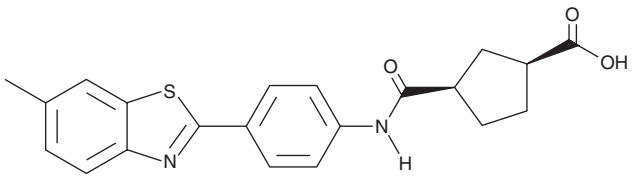
PRODUCT INFORMATION

C3001a

Item No. 31064

CAS Registry No.:	2415154-29-7
Formal Name:	(1S,3R)-3-[[[4-(6-methyl-2-benzothiazolyl)phenyl]amino]carbonyl]-cyclopentanecarboxylic acid
MF:	$C_{21}H_{20}N_2O_3S$
FW:	380.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 215, 330 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

C3001a is supplied as a crystalline solid. A stock solution may be made by dissolving the C3001a in the solvent of choice, which should be purged with an inert gas. C3001a is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of C3001a in these solvents is approximately 30 mg/ml.

C3001a is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, C3001a should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. C3001a has a solubility of approximately 0.09 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

C3001a is an activator of the two-pore domain potassium channels K_{2P}2.1/TREK1 and K_{2P}10.1/TREK2.[1] It increases current amplitude in HEK293T cells expressing K_{2P}2.1/TREK1 or K_{2P}10.1/TREK2 (EC_{50}s = 12.81 and 11.31 µM, respectively, for the human channels). C3001a is selective for K_{2P}2.1/TREK1 and K_{2P}10.1/TREK2 over a panel of five additional K_{2P} channels at 10 µM. *In vivo*, C3001a (10 mg/kg) reduces edema and pancreatic necrosis in a mouse model of acute pancreatitis. It reduces mechanical and thermal hyperalgesia in a mouse model of chronic inflammatory pain induced by complete Freund's adjuvant (CFA). C3001a (5 mg/kg) also reduces cold hyperalgesia in a mouse model of neuropathic pain induced by spared nerve injury (SNI).

Reference

1. Qiu, Y., Huang, L., Fu, J., *et al*. TREK channel family activator with a well-defined structure-activation relationship for pain and neurogenic inflammation. *J. Med. Chem.* **63(7)**, 3665-3677 (2020).

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