
Product Data Sheet

Product Name: FMK 9a
Cat. No.: GC36063

Chemical Properties

Cas. No. 1955550-51-2

SMILES O=C(C1=C(C=CC=C2)C2=CC=C1)N[C@H](C(NCC(CF)=O)=O)CC3=CC=CC=C3

Formula $C_{23}H_{21}FN_2O_3$ M.Wt 392.42

Solubility DMSO: 100 mg/mL (254.83 mM) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

FMK 9a is an autophagin-1 inhibitor with IC50 values of 80 and 73 μM in FRET and LRA assay. IC50: 80 nM (autophagin-1, FRET assay); 73 nM (autophagin-1, LRA assay)[1]

ATG4B or autophagin-1 is a cysteine protease that cleaves ATG8 family proteins. ATG4B plays essential roles in the autophagosome formation and the autophagy pathway. FMK 9a shows strong inhibition of ATG4B, with IC50 values of 80 and 73 nM in the TR-FRET and cellular-based LRA assays, respectively. LC-MS/MS study indicates that FMK 9a forms an irreversible covalent bond with the more reactive thiol group of Cys74 located at the catalytic site of ATG4B and thus inactivates ATG4B proteolytic activity[1].

FMK 9a shows moderate solubility (LYSA: 41 μg/mL) and high human and mouse liver microsome clearances of 13.9 and 70 mL/kg per minute[1].

[1]. Qiu Z, et al. Discovery of Fluoromethylketone-Based Peptidomimetics as Covalent ATG4B (Autophagin-1) Inhibitors. ACS Med Chem Lett. 2016 Jun 25;7(8):802-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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