

Product Data Sheet

Product Name: IU1-47
Cat. No.: GC64956

Chemical Properties

Cas. No. 670270-31-2

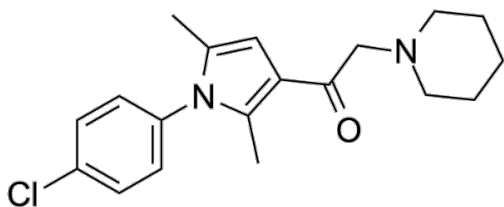
Formula C₁₉H₂₃ClN₂O M.Wt 330.85

Solubility DMSO : 16.67 mg/mL (50.39 mM; Need ultrasonic) 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

IU1-47 is a potent and specific USP14 inhibitor with an IC₅₀ of 0.6 μM. IU1-47 inhibits IsoT/USP5 with an IC₅₀ of 20 μM. IU1-47 induces tau elimination in cultured neurons[1].

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

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IU1-47 is essentially inactive on free USP14 (USP14 that is not bound to the proteasome). IU1-47 (25 μ M) antagonizes USP14 deubiquitinating activity and stimulates substrate degradation in vitro[1]. IU1-47 stimulates tau degradation principally via the ubiquitin-proteasome system. IU1-47 (3 μ M, 10 and 30 μ M; 48 hours) significantly decreases Tau and phosphotau species Ser-202/Thr-205 levels in murine cortical primary neurons. The level of USP14 itself does not change[1].

[1]. Boselli M, et al. An inhibitor of the proteasomal deubiquitinating enzyme USP14 induces tau elimination in cultured neurons. J Biol Chem. 2017 Nov 24;292(47):19209-19225.

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