

Product Data Sheet

Product Name: QO-83
Cat. No.: GC79541

Chemical Properties

Cas. No. 2253948-15-9

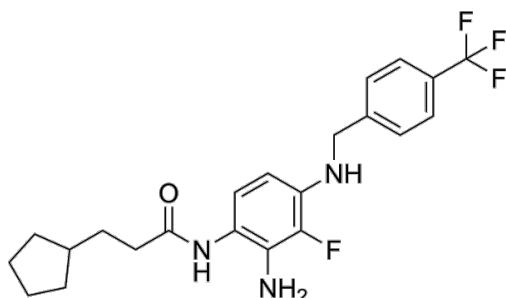
Formula $C_{22}H_{25}F_4N_3O$ M.Wt 423.45

Solubility DMSO: 50 mg/mL (118.08 mM; Need ultrasonic) Storage Store at 4°C, away from moisture and light

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

QO-83, Retigabine analogue, is a voltage-gated potassium channel KCNQ2 (Kv7.2) activator with an EC₅₀ of 0.56 μM. QO-83 binds to a single hydrophobic pocket of KCNQ2-CaM complex in closed

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

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conformation. QO-83 induces a negative shift in the voltage-dependent activation curve of KCNQ2 channels, increasing the channel's voltage sensitivity. QO-83 can be used for the research of epilepsies [1].

In Vitro, QO-83 (20 μ M; 1 h) binds to a single hydrophobic pocket in the PD (S5-S6 interface) of human KCNQ2-CaM complex in closed conformation, inducing conformational rearrangements of the PD and VSD (S3-S4 interface)[1]. QO-83 (10 μ M) shifts the voltage-dependent activation curve negatively[1].

References:

[1]. Zhao Y, et al. Structure basis for the activation of KCNQ2 by endogenous and exogenous ligands. Cell Rep. 2026;45(1):116771.

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