

Product Data Sheet

Product Name: DYRK2-IN-2 hydrochloride

Cat. No.: GC81308

Chemical Properties

Cas. No.

Formula $C_{21}H_{25}ClN_2O_3S$ M.Wt 420.95

Solubility DMSO: 25 mg/mL (59.39 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.

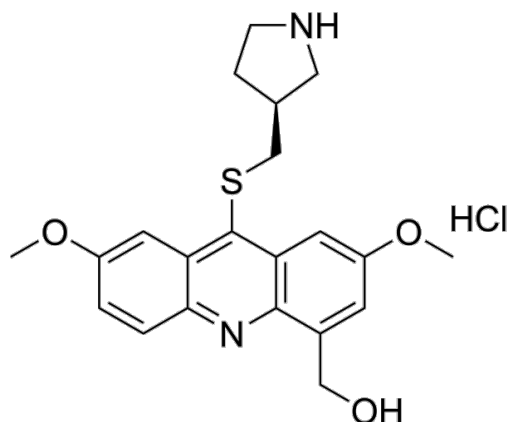
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Background

DYRK2-IN-2 hydrochloride is a selective DYRK2 inhibitor with an IC_{50} of 40.3 nM. DYRK2-IN-2 hydrochloride shows weaker inhibitory activity against DYRK1A (IC_{50} = 1842 nM), DYRK1B (IC_{50} = 1335 nM), DYRK4 (IC_{50} = 1931 nM), DYRK3 (IC_{50} = 112 nM) and CLK (IC_{50} = 540-6496 nM). DYRK2-IN-2 hydrochloride inhibits the phosphorylation of Thr212 in Tau protein. DYRK2-IN-2 hydrochloride is applicable for neuronal research [1].

In Vitro, DYRK2-IN-3 (Compound C17) (up to 10 μ M) hydrochloride potently and selectively inhibits recombinant DYRK2 with an IC_{50} of 0.0403 μ M; it shows weak activity against other kinases of the DYRK and CLK families, and no activity against CDK5/p25, CK1 ϵ or GSK3 β [1]. DYRK2-IN-3 (1-30 μ M; 6 h) hydrochloride potently and dose-dependently inhibits Thr212-Tau phosphorylation in SH-

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SY5Y cells expressing 4R-Tau^[1]. DYRK2-IN-3 (48 h) hydrochloride exhibits cytotoxicity against HT22 cells, with an IC₅₀ of 14.7 µM following 48 h of exposure^[1].

References:

[1]. Lindberg MF, et al. Comparative Efficacy and Selectivity of Pharmacological Inhibitors of DYRK and CLK Protein Kinases. J Med Chem. 2023 Mar 23;66(6):4106-4130.

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