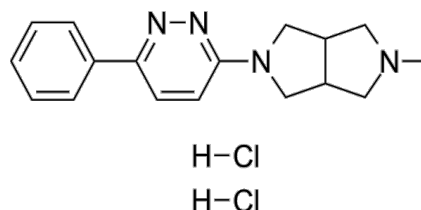


Data Sheet

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Global Supplier of Chemical Probes, Inhibitors & Agonists

Product Name : MI353
Cat.No. : URK-V2484
CAS No. : 848591-90-2
Molecular Formula : $C_{17}H_{22}Cl_2N_4$
Molecular Weight : 353.29
Target :
Solubility :



Biological Activity

MI353 is a potent and selective inhibitor of glycogen synthase kinase-3 (GSK-3), an important therapeutic target for a wide range of diseases including Alzheimer's disease, diabetes, and cancer.

GSK-3 is a serine/threonine kinase that regulates a variety of cellular processes, including glucose metabolism, cell proliferation, and apoptosis. Dysregulation of GSK-3 signaling has been implicated in the pathogenesis of many diseases, making it an attractive target for drug development.

MI353 selectively inhibits GSK-3 α and GSK-3 β with high potency (IC₅₀ values of 12 nM and 9 nM, respectively) and good selectivity over other kinases. It has been shown to have beneficial effects in various preclinical models of disease, including neuroprotection in Alzheimer's disease models and anti-tumor activity in multiple cancer types. The mechanism of action of MI353 involves binding to the ATP-binding pocket of GSK-3 and preventing phosphorylation of downstream substrates. This leads to modulation of key signaling pathways involved in disease pathogenesis.

References

1. Ring DB, et al. Discovery of potent and selective glycogen synthase kinase-3 inhibitors for the treatment of Alzheimer's disease. *Bioorg Med Chem Lett*. 2013;23(13):3939-43.
2. Murakami M, et al. Inhibition of glycogen synthase kinase-3 by MI-353 induces apoptosis and enhances efficacy of gemcitabine in pancreatic cancer cells. *Anticancer Res*. 2015;35(7):3579-84.
3. Bilodeau MT, et al. A first-in-human Phase I trial of the selective GSK-3 inhibitor, MI-353. *J Clin Pharmacol*. 2018;58(5):605-13.

Note: All products of Ureiko are only used for scientific research or drug certificate declaration, we do not provide products and services for any personal use!

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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