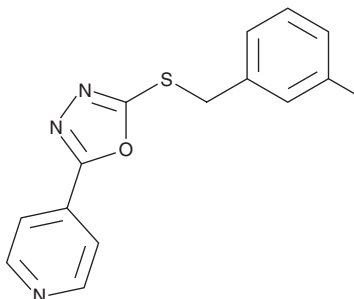


PRODUCT INFORMATION

GSK3β Inhibitor II

Item No. 19077

CAS Registry No.: 478482-75-6
Formal Name: 4-[5-[[[3-iodophenyl)methyl]thio]-1,3,4-oxadiazol-2-yl]-pyridine
Synonym: Glycogen Synthase Kinase 3β Inhibitor II, Tip-oxadiazole
MF: C₁₄H₁₀IN₃OS
FW: 395.2
Purity: ≥95%
UV/Vis.: λ_{max}: 282 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

GSK3β inhibitor II is supplied as a crystalline solid. A stock solution may be made by dissolving the GSK3β inhibitor II in the solvent of choice. GSK3β inhibitor II is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of GSK3β inhibitor II in these solvents is approximately 3 and 10 mg/ml, respectively.

GSK3β inhibitor II is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GSK3β inhibitor II should first be dissolved in DMF and then diluted with the aqueous buffer of choice. GSK3β inhibitor II has a solubility of approximately 0.09 mg/ml in a 1:10 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

GSK3β Inhibitor II is a potent inhibitor of glycogen synthase kinase 3β (GSK3β; IC₅₀ = 390 nM) that does not inhibit GSK3α.¹ Also referred to as tip-oxadiazole, this compound blocks the functional regulation of p53 by GSK3β, decreasing levels of MDM2, p21, and Bax and modulating mitochondrial p53 apoptotic signaling.² GSK3β Inhibitor II also blocks GSK3β-mediated Tau phosphorylation and Aβ₂₅₋₃₅-induced memory impairment in mouse hippocampus.³

References

1. Naerum, L., Nørskov-Lauritsen, L., and Olesen, P. H. Scaffold hopping and optimization towards libraries of glycogen synthase kinase-3 inhibitors. *Bioorg. Med. Chem. Lett.* **12**(11), 1525-1528 (2002).
2. Watcharasit, P., Bijur, G. N., Song, L., et al. Glycogen synthase kinase-3β (GSK3β) binds to and promotes the actions of p53. *J. Biol. Chem.* **278**(49), 49972-48879 (2003).
3. Lahmy, V., Meunier, J., Malmström, S., et al. Blockade of Tau hyperphosphorylation and Aβ1-42 generation by the aminotetrahydrofuran derivative ANAVEX2-73, a mixed muscarinic and σ1 receptor agonist, in a nontransgenic mouse model of Alzheimer's disease. *Neuropsychopharmacology* **38**(9), 1706-1723 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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