

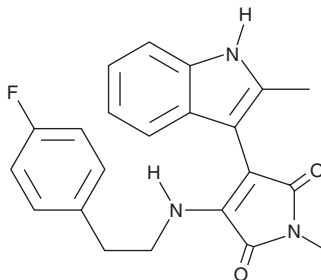
PRODUCT INFORMATION



IM-12

Item No. 17673

CAS Registry No.: 1129669-05-1
Formal Name: 3-[[2-(4-fluorophenyl)ethyl]amino]-1-methyl-4-(2-methyl-1H-indol-3-yl)-1H-pyrrole-2,5-dione
Synonym: GSK3 β Inhibitor XIX
MF: C₂₂H₂₀FN₃O₂
FW: 377.4
Purity: \geq 98%
UV/Vis.: λ_{max} : 226 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

IM-12 is supplied as a crystalline solid. A stock solution may be made by dissolving the IM-12 in the solvent of choice, which should be purged with an inert gas. IM-12 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of IM-12 in these solvents is approximately 1, 30, and 50 mg/ml, respectively.

IM-12 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IM-12 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. IM-12 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Glycogen synthase kinase 3 β (GSK3 β) is a constitutively active serine/threonine protein kinase implicated in several important regulatory processes. It can phosphorylate β -catenin, an intracellular signal transducer in the Wnt signaling pathway, which leads to β -catenin degradation. IM-12 is a non-symmetrically substituted indolylmaleimide that increases β -catenin levels by inhibiting GSK3 β (IC₅₀ = 53 nM).^{1,2} It has been shown to reduce proliferation and increase differentiation of a ReNCell VM cell line derived from human ventral midbrain.² IM-12 is also reported to have a depolymerizing effect on *in vitro* tubulin assembly.³

References

1. Brennfürer, A., Neumann, H., Pews-Davtyan, A., *et al.* Catalytic and stoichiometric synthesis of novel 3-aminocarbonyl-, 3-alkoxycarbonyl-, and 3-amino-4-indolylmaleimides. *J. Org. Chem.* **2009**(1), 38-42 (2009).
2. Schmöle, A.C., Brennfürer, A., Karapetyan, G., *et al.* Novel indolylmaleimide acts as GSK-3 β inhibitor in human neural progenitor cells. *Bioorg. Med. Chem.* **18**(18), 6785-6795 (2010).
3. Eisenlöffel, C., Schmöle, A.C., Pews-Davtyan, A., *et al.* Interference of a novel indolylmaleimide with microtubules induces mitotic arrest and apoptosis in human progenitor and cancer cells. *Biochem. Pharmacol.* **85**(6), 763-771 (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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