

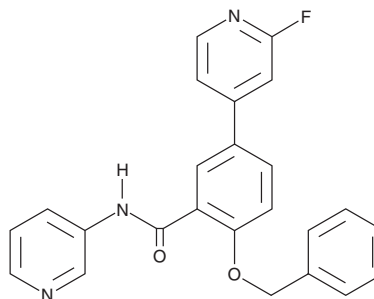
PRODUCT INFORMATION



GSK2578215A

Item No. 14603

CAS Registry No.: 1285515-21-0
Formal Name: 5-(2-fluoro-4-pyridinyl)-2-(phenylmethoxy)-N-3-pyridinyl-benzamide
MF: C₂₄H₁₈FN₃O₂
FW: 399.4
Purity: ≥98%
UV/Vis.: λ_{max}: 271 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

GSK2578215A is supplied as a crystalline solid. A stock solution may be made by dissolving the GSK2578215A in the solvent of choice, which should be purged with an inert gas. GSK2578215A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of GSK2578215A in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

GSK2578215A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GSK2578215A should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. GSK2578215A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

GSK2578215A is a potent inhibitor of leucine-rich repeat kinase 2 (LRRK2; IC₅₀ = 8.9 nM) that also inhibits the G2019S mutant of LRRK2 (IC₅₀ = 10.1 nM).¹ It displays selectivity for LRRK2 over a panel of 460 other kinases. GSK2578215A prevents phosphorylation of both wild-type and G2019S LRRK2 in mouse spleen and kidney, but not in brain, following intraperitoneal injection of 100 mg/kg.¹ GSK2578215A induces protective autophagy in SH-SY5Y cells and blocks LRRK2-dependent Na⁺/Ca²⁺ exchanger activity in dendritic cells.^{2,3}

References

1. Reith, A.D., Bamborough, P., Jandu, K., *et al.* GSK2578215A; a potent and highly selective 2-arylmethoxy-5-substituent-N-arylbenzamide LRRK2 kinase inhibitor. *Bioorg. Med. Chem. Lett.* **22(17)**, 5625-5629 (2012).
2. Saez-Atienzar, S., Bonet-Ponce, L., Blesa, J.R., *et al.* The LRRK2 inhibitor GSK2578215A induces protective autophagy in SH-SY5Y cells: Involvement of Drp-1-mediated mitochondrial fission and mitochondrial-derived ROS signaling. *Cell Death Dis.* **14(5)**, e1368 (2014).
3. Yan, J., Almilaji, A., Schmid, E., *et al.* Leucine-rich repeat kinase 2-sensitive Na⁺/Ca²⁺ exchanger activity in dendritic cells. *FASEB J.* **29(5)**, 1701-1710 (2015).

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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