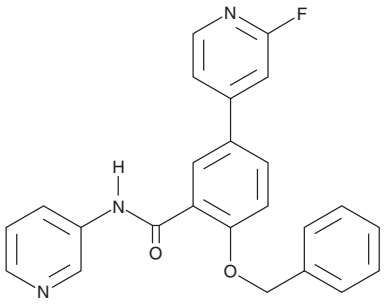
# PRODUCT INFORMATION

## GSK2578215A

*Item No. 14603*



| | |
|---|---|
| **CAS Registry No.:** | 1285515-21-0 |
| **Formal Name:** | 5-(2-fluoro-4-pyridinyl)-2-(phenylmethoxy)-N-3-pyridinyl-benzamide |
| **MF:** | $C_{24}H_{18}FN_3O_2$ |
| **FW:** | 399.4 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 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; $IC_{50}$ = 8.9 nM) that also inhibits the G2019S mutant of LRRK2 ($IC_{50}$ = 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 $Na^+/Ca^{2+}$ 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-arylmethyloxy-5-substitutent-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 $Na^+/Ca^{2+}$ exchanger activity in dendritic cells. *FASEB J.* **29(5)**, 1701-1710 (2015).





**CAYMAN CHEMICAL**
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
**PHONE:** [800] 364-9897
[734] 971-3335
**FAX:** [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM