

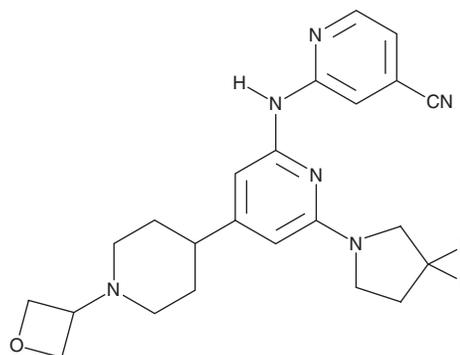
PRODUCT INFORMATION



GNE-3511

Item No. 19174

CAS Registry No.: 1496581-76-0
Formal Name: 2-[[6-(3,3-difluoro-1-pyrrolidinyl)-4-[1-(3-oxetanyl)-4-piperidinyl]-2-pyridinyl]amino]-4-pyridinecarbonitrile
MF: C₂₃H₂₆F₂N₆O
FW: 440.5
Purity: ≥98%
UV/Vis.: λ_{max}: 275, 320, 358 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

GNE-3511 is supplied as a crystalline solid. A stock solution may be made by dissolving the GNE-3511 in the solvent of choice, which should be purged with an inert gas. GNE-3511 is soluble in organic solvents such as methanol and DMSO. The solubility of GNE-3511 in these solvents is approximately 1 and 20 mg/ml, respectively.

Description

GNE-3511 is a selective and highly potent inhibitor of dual leucine zipper kinase (DLK), also known as MAP3K12 (K_i = 500 pM).¹ It also inhibits phosphorylated JNK (IC₅₀ = 30 nM) and is highly selective for DLK over other MAP kinases (IC₅₀ > 5,000 nM for MKK4 and MKK7), JNKs (IC₅₀s = 129, 514, and 364 nM for JNK1, JNK2, and JNK3, respectively), and mixed-lineage kinases (MLKs; IC₅₀s = 68, 767, and 602 nM for MLK1, MLK2, and MLK3, respectively). GNE-3511 protects primary neurons in an *in vitro* axon degeneration assay (IC₅₀ = 107 nM). In an MPTP mouse model of Parkinson's disease, a high dose of GNE-3511 (75 mg/kg) completely suppresses phosphorylated c-Jun (p-c-Jun) expression, while a low dose (37.5 mg/kg) moderately reduces its expression.

Reference

1. Patel, S., Cohen, F., Dean, B.J., *et al.* Discovery of dual leucine zipper kinase (DLK, MAP3K12) inhibitors with activity in neurodegeneration models. *J. Med. Chem.* **58**(1), 401-418 (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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