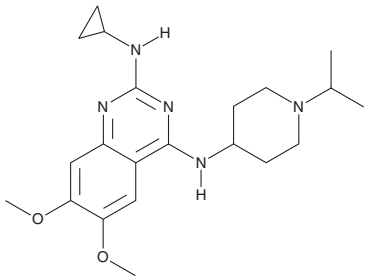
PRODUCT INFORMATION

ZT-12-037-01

Item No. 46718

CAS Registry No.:	2328073-61-4
Formal Name:	N^2-cyclopropyl-6,7-dimethoxy-N^4-[1-(1-methylethyl)-4-piperidinyl]-2,4-quinazolinediamine
MF:	$C_{21}H_{31}N_5O_2$
FW:	385.5
Purity:	≥98%
Supplied as:	A 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

ZT-12-037-01 is supplied as a solid. A stock solution may be made by dissolving the ZT-12-037-01 in the solvent of choice, which should be purged with an inert gas. ZT-12-037-01 is slightly soluble (0.1-1 mg/ml) in DMSO.

Description

ZT-12-037-01 has been reported to reduce N-Ras phosphorylation in a cell-free assay containing STK19 (IC_{50} = 24.04 nM).[1] However, subsequent studies have shown that STK19, also known as winged helix repair factor 1, is a nuclear, DNA-binding protein that does not contain a kinase domain or appear to phosphorylate Ras at serine 89 but binds to Ras and modulates RAS signaling.[2-4] ZT-12-037-01 inhibits colony formation and proliferation in immortalized human melanocytes expressing the melanoma-associated N-Ras mutation $N\text{-}Ras^{Q61R}$ and either wild-type STK19 or mutant $STK19^{D89N}$.[1] It also reduces tumor growth in a mouse xenograft model using SK-MEL-2 melanoma cells, which endogenously express $N\text{-}Ras^{Q61R}$, when administered at doses of 25 and 50 mg/kg per day.

References

1. Yin, C., Zhu, B., Zhang, T., *et al.* Pharmacological targeting of STK19 inhibits oncogenic NRAS-driven melanomagenesis. *Cell* **176(5)**, 1113-1127 (2019).
2. Rodríguez-Martínez, M., Boissiére, T., Noe Gonzalez, M., *et al.* Evidence that *STK19* is not an NRAS-dependent melanoma driver. *Cell* **181(6)**, 1395-1405 (2020).
3. Li, Y., Gong, Y., Zhou, Y., *et al.* STK19 is a DNA/RNA-binding protein critical for DNA damage repair and cell proliferation. *J. Cell Biol.* **223(2)**, e202301090 (2024).
4. Li, Y., Gong, Y., Chen, P., *et al.* Tandem winged helix protein previously known as STK19 binds RAS and regulates its signaling without its phosphorylation at serine 89. *Int. J. Biol. Macromol.* **365:152338**, (2026).

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.

WARRANTY AND LIMITATION OF REMEDY
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