Product Datasheet

PolQi2

Catalog No. **BP-06768** · CAS **2565638-16-4** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-11-16**

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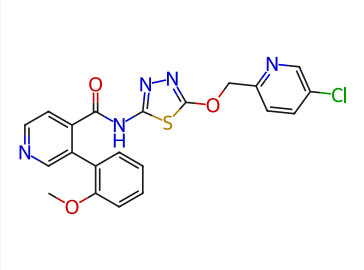
Target	Research area
DNA/RNA Synthesis	**Others**

Molecular formula	**$C_{21}H_{16}ClN_5O_3S$**
Molecular weight	**453.9010**

STRUCTURE



DESCRIPTION

PolQi2 is a PolΘ inhibitor that targets and inhibits alt-EJ (alternative end-joining) repair by inhibiting the helicase domain at the N-terminus of PolΘ. PolQi2 enhances the precision and integration efficiency of gene editing at different loci and in various cell lines. Furthermore, the combined use of PolQi2 with DNA-PK inhibitors reduces the off-target effects of Cas9. PolQi2 can be used in gene editing research [2].

BIOLOGICAL ACTIVITY

In Vitro

PolQi2 (3 μM, 14 days), in combination with DNA-PK inhibitors (1 μM, 14 days), efficiently and stably achieves targeted gene insertion in HeLa and Jurkat cells, without adversely affecting cell proliferation [1].

SOLUBILITY

soluble in DMSO

REFERENCES

[1]. imberger S, et al. Simultaneous inhibition of DNA-PK and Polθ improves integration efficiency and precision of genome editing. Nat Commun. 2023 Aug 14;14(1):4761.

[2]. Antoniou P, et al. Improved nuclease-based prime editing by DNA repair modulation and pegRNA engineering[J]. BioRxiv, 2024: 2024.02. 01.578377.