# TCMDC-135051 TFA

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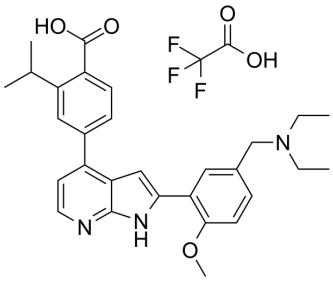
| **Cat. No.:** | HY-126323A |
| **CAS No.:** | 2571578-55-5 |
| **Molecular Formula:** | $C_{31}H_{34}F_3N_3O_5$ |
| **Molecular Weight:** | 585.61 |
| **Target:** | Parasite |
| **Pathway:** | Anti-infection |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |



## BIOLOGICAL ACTIVITY

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| **Description** | TCMDC-135051 TFA is a highly selective and potent protein kinase *Pf*CLK3 inhibitor with low off-target toxicity. TCMDC-135051 TFA prevents trophozoite-to-schizont transition, disrupts transcription and reduces transmission to the mosquito vector. TCMDC-135051 TFA has antiparasiticidal activity ($EC_{50}$=320 nM)[1]. |
| **$IC_{50}$ & Target** | PfCLK3[1] |
| **In Vitro** | TCMDC-135051 TFA shows potent activity against P. berghei sporozoites in a liver invasion and development assay in which the compound shows a pEC50 value of 6.17 ($EC_{50}$=0.40 μM) [1].<br>The kinase assays using recombinant PvCLK3 (P. vivax) and PbCLK3 (P. berghei) show that TCMDC-135051 TFA has near-equipotent inhibition at these two orthologs, with $pIC_{50}$ values of 7.47 ($IC_{50}$=0.033 μM) and 7.86 ($IC_{50}$=0.013 μM), respectively [1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES

[1]. Alam MM, et al. Validation of the protein kinase PfCLK3 as a multistage cross-species malarial drug target. Science. 2019 Aug 30;365(6456). pii: eaau1682.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA