

UNC2025

## Chemical Properties

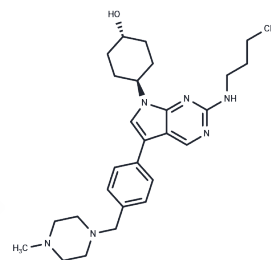
CAS No. : 1429881-91-3

Formula: C<sub>28</sub>H<sub>40</sub>N<sub>6</sub>O

Molecular Weight: 476.66

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



## Biological Description

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                | UNC2025 (mrX-6313)(IC <sub>50</sub> of 0.74 nM and 0.8 nM) is a potent and orally bioavailable dual MER/FLT3 inhibitor. UNC-2025 is about 20-fold selectivity higher than Axl and Tyro3.                                                                                                                                                                                                                                                                                                 |
| Targets(IC <sub>50</sub> ) | FLT,TAM Receptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| In vitro                   | In 697 B-ALL cells, UNC-2025 potently inhibits Mer phosphorylation with IC <sub>50</sub> of 2.7 nM. In A549 NSCLC and Molm-14 AML cell lines, UNC-2025 causes significant inhibition of colony formation dependent on Mer8 and Flt3. [1] In H2228 and H1299 cell lines, UNC-2025 inhibits MERTK oncogenic signaling downstream, such as basal and stimulated pAKT and pERK1/2. In four NSCLC cell lines, UNC-2025 also induces apoptotic cell death, and decreases colony formation. [2] |
| In vivo                    | In mice bearing 697 acute leukemia tumors, UNC-2025 (3 mg/kg, p.o.) shows good solubility and DMPK properties, and results in effective target inhibition. [1] In mice bearing H2228 or A549 tumors, UNC-2025 (50 mg/kg, p.o.) inhibits tumor growth. [2]                                                                                                                                                                                                                                |

## Solubility Information

|            |                                                                                                                                                                                                                 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solubility | H <sub>2</sub> O: Insoluble<br>Ethanol: 8 mg/mL (15.59 mM),Heating is recommended.<br>DMSO: 150 mg/mL (314.69 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Preparing Stock Solutions

|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 2.0979 mL | 10.4897 mL | 20.9793 mL |
| 5 mM  | 0.4196 mL | 2.0979 mL  | 4.1959 mL  |
| 10 mM | 0.2098 mL | 1.049 mL   | 2.0979 mL  |
| 50 mM | 0.042 mL  | 0.2098 mL  | 0.4196 mL  |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

### Reference

Zhang W, et al. J Med Chem. 2014, 57(16), 7031-7041.

Wei S, Guan G, Luan X, et al. NLRP3 inflammasome constrains liver regeneration through impairing MerTK-mediated macrophage efferocytosis. Science Advances. 2025, 11(1): eadq5786.

Cummings CT, et al. Mol Cancer Ther. 2015, 14(9), 2014-2022.

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