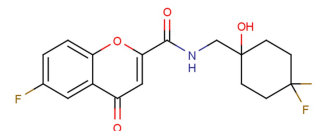


## LysRs-IN-2

## Chemical Properties

|                   |  |
|-------------------|--|
| CAS No.:          | 2170696-76-9   |
| Formula:          | C <sub>17</sub> H <sub>16</sub> F <sub>3</sub> NO <sub>4</sub>         |
| Molecular Weight: | 355.31   |
| Appearance:       | N/A  |
| Storage:          | 0-4°C for short term (days to weeks), or -20°C for long term (months). |



## Biological Description

|                            |   |
|----------------------------|---|
| Description                | LysRs-IN-2 is a lysyl-tRNA synthetase (KRS) inhibitor with IC <sub>50</sub> s of 0.13 $\mu$ M and 0.015 $\mu$ M for <i>Cryptosporidium parvum</i> lysyl-tRNA synthetase (CpKRS) and <i>Plasmodium falciparum</i> lysyl-tRNA synthetase (PfKRS), respectively.   |
| Targets(IC <sub>50</sub> ) | PfKRS: 0.015 $\mu$ M<br>CpKRS: 0.13 $\mu$ M   |
| In vitro                   | LysRs-IN-2 is active against whole-cell bloodstream <i>P. falciparum</i> 3D7 (EC <sub>50</sub> =0.27 $\mu$ M), HepG2 cells (EC <sub>50</sub> =49 $\mu$ M), HsKRS (IC <sub>50</sub> =1.8 $\mu$ M), and <i>Cryptosporidium parvum</i> (EC <sub>50</sub> =2.5 $\mu$ M)[1].   |
| In vivo                    | LysRs-IN-2 (20 mg/kg; orally once a day for 7 days) reduces parasite shedding in NOD SCID gamma mice and INF- $\gamma$ -knockout mice ( <i>Cryptosporidium</i> mouse models)[1]. LysRs-IN-2 (1.5 mg/kg; orally once a day for 4 days) reduces parasitemia by 90% in the murine <i>P. falciparum</i> SCID model. |

## Solubility Information

|            |   |
|------------|---|
| Solubility | DMSO: 60 mg/mL (168.87 mM)<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

## Preparing Stock Solutions

|       | 1mg      | 5mg       | 10mg      |
|-------|----------|-----------|-----------|
| 1 mM  | 2.814 mL | 14.072 mL | 28.144 mL |
| 5 mM  | 0.563 mL | 2.814 mL  | 5.629 mL  |
| 10 mM | 0.281 mL | 1.407 mL  | 2.814 mL  |
| 50 mM | 0.056 mL | 0.281 mL  | 0.563 mL  |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

## Reference

1. Baragaña B, et al. Lysyl-tRNA synthetase as a drug target in malaria and cryptosporidiosis. *Proc Natl Acad Sci U S A*. 2019 Apr 2;116(14):7015-7020.

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