

## IDO1/TDO-IN-4

## Chemical Properties

CAS No. : 461424-21-5

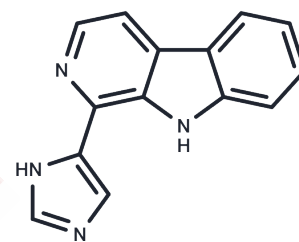
Formula: C<sub>14</sub>H<sub>10</sub>N<sub>4</sub>

Molecular Weight: 234.26

Store at low temperature, Keep away from moisture

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

Actual storage temperature shall be subject to the COA.



## Biological Description

|               |  |
|---------------|--|
| Description   | IDO1/TDO-IN-4 is a novel dual inhibitor of IDO1/TDO with antidepressant activity, forming hydrogen bonds with IDO1 and $\pi$ - $\pi$ stacking interactions with TDO. IDO1/TDO-IN-4 rescues lipopolysaccharide-induced depressive-like behaviors in mice, used for cancer and Alzheimer's disease research. |
| Targets(IC50) | IDO, Indoleamine 2,3-Dioxygenase (IDO)   |
| In vitro      | IDO1/TDO-IN-4 has dual inhibition on IDO1 and TDO with IC <sub>50</sub> values of 3.53 $\mu$ M and 1.15 $\mu$ M, respectively.<br>IDO1/TDO-IN-4 (0-2 $\mu$ M, 1 h) can inhibit the activity of BV2 microglia induced by LPS. [1]   |
| In vivo       | IDO1/TDO-IN-4 (20 mg/kg) also salvaged lipopolysaccharids-induced depression-like behavior IN mice. [1]  |

## Solubility Information

|                     |   |
|---------------------|---|
| Solubility          | DMSO: 150 mg/mL (640.31 mM), Sonication is recommended.<br>( $<$ 1 mg/ml refers to the product slightly soluble or insoluble)   |
| In vivo Formulation | 10% DMSO+90% Saline: 10 mg/mL (42.69 mM), Solution.<br><i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |

### Preparing Stock Solutions

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|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 4.2688 mL | 21.3438 mL | 42.6876 mL |
| 5 mM  | 0.8538 mL | 4.2688 mL  | 8.5375 mL  |
| 10 mM | 0.4269 mL | 2.1344 mL  | 4.2688 mL  |
| 50 mM | 0.0854 mL | 0.4269 mL  | 0.8538 mL  |

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Zhang Y, et al. Discovery of 1-(Hetero)aryl- $\beta$ -carboline Derivatives as IDO1/TDO Dual Inhibitors with Antidepressant Activity. *J Med Chem.* 2022 Aug 25;65(16):11214-11228.

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