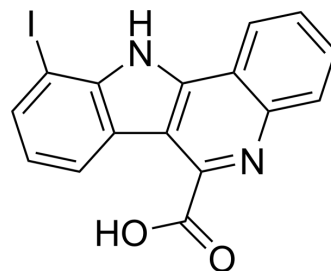


## Dyrk1A-IN-5

|                    |   |       |          |
|--------------------|---|-------|----------|
| Cat. No.:          | HY-146221   |       |          |
| CAS No.:           | 1685235-41-9  |       |          |
| Molecular Formula: | C <sub>16</sub> H <sub>9</sub> IN <sub>2</sub> O <sub>2</sub> |       |          |
| Molecular Weight:  | 388.16  |       |          |
| Target:            | DYRK  |       |          |
| Pathway:           | Protein Tyrosine Kinase/RTK                                   |       |          |
| Storage:           | Powder  | -20°C | 3 years  |
|                    |   | 4°C   | 2 years  |
|                    | In solvent  | -80°C | 6 months |
|                    |   | -20°C | 1 month  |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 3.33 mg/mL (8.58 mM; ultrasonic and warming and heat to 160°C)

| Concentration | Mass      |            |            |
|---------------|-----------|------------|------------|
|               | 1 mg      | 5 mg       | 10 mg      |
| 1 mM          | 2.5763 mL | 12.8813 mL | 25.7626 mL |
| 5 mM          | 0.5153 mL | 2.5763 mL  | 5.1525 mL  |
| 10 mM         | ---       | ---        | ---        |

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Dyrk1A-IN-5 (compound 5j) is a potent and selective DYRK1A inhibitor, with an IC<sub>50</sub> of 6 nM. Dyrk1A-IN-5 dose-dependently reduces the phosphorylation of Thr434 in SF3B1, with an IC<sub>50</sub> of 0.5 μM. Dyrk1A-IN-5 inhibits phosphorylation of tau at Thr212, with an IC<sub>50</sub> of 2.1 μM. Dyrk1A-IN-5 can be used for Down syndrome research<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

|                                    |                                      |  |
|------------------------------------|--------------------------------------|--|
| DYRK1A<br>6 nM (IC <sub>50</sub> ) | DYRK1B<br>600 nM (IC <sub>50</sub> ) | DYRK2<br>>10000 nM (IC <sub>50</sub> ) |
|------------------------------------|--------------------------------------|--|

### REFERENCES

[1]. Falke H, et al. 10-iodo-11H-indolo[3,2-c]quinoline-6-carboxylic acids are selective inhibitors of DYRK1A. J Med Chem. 2015 Apr 9;58(7):3131-43.

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

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