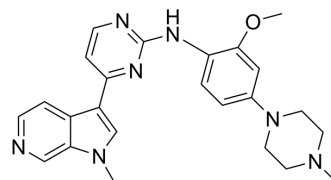


## AZ191

|                    |  |       |         |
|--------------------|--|-------|---------|
| Cat. No.:          | HY-12277   |       |         |
| CAS No.:           | 1594092-37-1                                     |       |         |
| Molecular Formula: | C <sub>24</sub> H <sub>27</sub> N <sub>7</sub> O |       |         |
| Molecular Weight:  | 429.52   |       |         |
| Target:            | DYRK   |       |         |
| Pathway:           | Protein Tyrosine Kinase/RTK                      |       |         |
| Storage:           | Powder   | -20°C | 3 years |
|                    |  | 4°C   | 2 years |
|                    | In solvent                                       | -80°C | 2 years |
|                    |  | -20°C | 1 year  |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 30 mg/mL (69.85 mM)  
 \* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent Concentration | Mass      |            |            |
|---------------------------|-----------------------|-----------|------------|------------|
|                           |                       | 1 mg      | 5 mg       | 10 mg      |
|                           | 1 mM                  | 2.3282 mL | 11.6409 mL | 23.2818 mL |
|                           | 5 mM                  | 0.4656 mL | 2.3282 mL  | 4.6564 mL  |
|                           | 10 mM                 | 0.2328 mL | 1.1641 mL  | 2.3282 mL  |

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (5.82 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: 2.5 mg/mL (5.82 mM); Suspended solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

#### Description

AZ191 is a potent inhibitor that selectively inhibits DYRK1B with IC<sub>50</sub> of 17 nM<sup>[1]</sup>.

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

DYRK1B

#### In Vitro

AZ191 (0.01-60 μM; 5 days) inhibits SW872 and SW982 cell lines in dose-dependent manner with IC<sub>50</sub>s of 3.183 μM and 1.279 μM, respectively<sup>[2]</sup>.  
 AZ191 (1-5 μM; 48 hours) down-regulates three anti-apoptotic proteins (Bcl-2, p21, and survivin) at higher concentrations<sup>[2]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
 Cell Proliferation Assay<sup>[2]</sup>

|                                      |   |
|--------------------------------------|---|
| Cell Line:                           | SW872, SW982 liposarcoma cells  |
| Concentration:                       | 0.01, 0.03, 0.1, 0.3, 0.6, 1, 3, 6, 10, 20, 60 $\mu$ M  |
| Incubation Time:                     | 5 days  |
| Result:                              | Dose-dependent growth inhibition with IC <sub>50</sub> s of 3.183 $\mu$ M and 1.279 $\mu$ M for SW872 and SW982 cell lines, respectively. |
| Western Blot Analysis <sup>[2]</sup> |   |
| Cell Line:                           | SW872, SW982 liposarcoma cells  |
| Concentration:                       | 1, 2, 3, 4, 5 $\mu$ M   |
| Incubation Time:                     | 48 hours  |
| Result:                              | Down-regulated three anti-apoptotic proteins (Bcl-2, p21, and survivin) at higher concentrations.   |

## CUSTOMER VALIDATION

- Sci Transl Med. 2018 Jul 18;10(450):eaaq1093.
- Biol Res. 2023 Mar 11;56(1):10.
- Patent. US20180263995A1.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Ashford AL, et al. A novel DYRK1B inhibitor AZ191 demonstrates that DYRK1B acts independently of GSK3 $\beta$  to phosphorylate cyclin D1 at Thr(286), not Thr(288). Biochem J. 2014 Jan 1;457(1):43-56.

[2]. Chen H, et al. Targeting DYRK1B suppresses the proliferation and migration of liposarcoma cells. Oncotarget. 2017 Nov 28;9(17):13154-13166.

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

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