



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

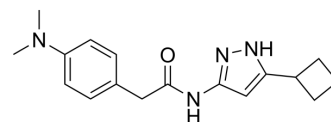
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## CP681301

**Cat. No.:** HY-150082  
**CAS No.:** 865317-32-4  
**Molecular Formula:** C<sub>17</sub>H<sub>22</sub>N<sub>4</sub>O  
**Molecular Weight:** 298  
**Target:** CDK; DNA/RNA Synthesis  
**Pathway:** Cell Cycle/DNA Damage  
**Storage:** 4°C, protect from light  
 \* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (335.57 mM)  
 \* "≥" means soluble, but saturation unknown.

|                              | Solvent<br>Concentration | Mass | 1 mg      | 5 mg       | 10 mg      |
|------------------------------|--------------------------|------|-----------|------------|------------|
|                              |                          |      |           |            |            |
| Preparing<br>Stock Solutions | 1 mM                     |      | 3.3557 mL | 16.7785 mL | 33.5570 mL |
|                              | 5 mM                     |      | 0.6711 mL | 3.3557 mL  | 6.7114 mL  |
|                              | 10 mM                    |      | 0.3356 mL | 1.6779 mL  | 3.3557 mL  |
|                              |                          |      |           |            |            |

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

### BIOLOGICAL ACTIVITY

#### Description

CP681301 is a potent CDK5 inhibitor. CP681301 shows antiproliferative activity. CP681301 decreases the expression of CD133, OLIG2, SOX2, KI67, pCDK5 protein level in GSCs (Glioma stem cells). CP681301 reduces self-renewal in mouse glioma xenografts. CP681301 shows anti-tumor activity in Drosophila<sup>[1]</sup>.

#### In Vitro

CP681301 (1 μM; 96 h) shows variably cytotoxic to the tested GSC cultures but is not toxic to NHNPs<sup>[1]</sup>.  
 CP681301 (0, 10, 50 μM; 48 h) decreases the expression of CD133, OLIG2, SOX2, KI67, pCDK5 protein level in GSCs<sup>[1]</sup>.  
 CP681301 (0, 0.5, 1 μM; ) suppresses the expression of CREB Ser133 phosphorylation<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
 Cell Cytotoxicity Assay<sup>[1]</sup>

|                  |                                            |
|------------------|--------------------------------------------|
| Cell Line:       | NHNP, N12.159, GBM121, GBM39, N08-74 cells |
| Concentration:   | 1 μM                                       |
| Incubation Time: | 96 h                                       |

|         |                                                                                                                                                                                                                 |                                                                                                                                                                                                                 |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | Result:                                                                                                                                                                                                         | Showed variably cytotoxic to the tested GSC cultures but was not toxic to NHNPs (normal human neuro-progenitors).                                                                                               |
|         | Western Blot Analysis <sup>[1]</sup>                                                                                                                                                                            |                                                                                                                                                                                                                 |
|         | Cell Line:                                                                                                                                                                                                      | GBM 121, GBM39 cells                                                                                                                                                                                            |
|         | Concentration:                                                                                                                                                                                                  | 1 $\mu$ M                                                                                                                                                                                                       |
|         | Incubation Time:                                                                                                                                                                                                | 48 h                                                                                                                                                                                                            |
|         | Result:                                                                                                                                                                                                         | Suppressed the expression of CD133, OLIG2, and SOX2 and cell proliferation marker KI67.                                                                                                                         |
| In Vivo | CP681301 (1 mM; fed; 10 days) shows anti-tumor activity in 0- to 2-day-old adult Drosophila <sup>[1]</sup> .<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |                                                                                                                                                                                                                 |
|         | Animal Model:                                                                                                                                                                                                   | 0- to 2-day-old adult Drosophila (brat-RNAi tumors) <sup>[1]</sup>                                                                                                                                              |
|         | Dosage:                                                                                                                                                                                                         | 1 mM                                                                                                                                                                                                            |
|         | Administration:                                                                                                                                                                                                 | Fed, 10 days                                                                                                                                                                                                    |
|         | Result:                                                                                                                                                                                                         | Reduced active phospho-dCdk5 (Y15) in tumor cells and the self-renewal properties of stem cells, increased the expression of neuronal marker Elav in these cells and increased the median survival by 2.8-fold. |

## REFERENCES

[1]. Mukherjee S, et al. CDK5 Inhibition Resolves PKA/cAMP-Independent Activation of CREB1 Signaling in Glioma Stem Cells. Cell Rep. 2018 May 8;23(6):1651-1664.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA