



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

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

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

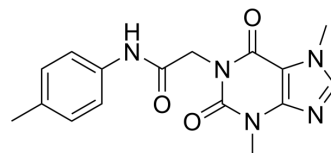
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

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

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## T-1-PMPA

|                           |   |       |          |
|---------------------------|---|-------|----------|
| <b>Cat. No.:</b>          | HY-158149   |       |          |
| <b>CAS No.:</b>           | 1323883-62-0  |       |          |
| <b>Molecular Formula:</b> | C <sub>16</sub> H <sub>17</sub> N <sub>5</sub> O <sub>3</sub> |       |          |
| <b>Molecular Weight:</b>  | 327.34  |       |          |
| <b>Target:</b>            | EGFR; Apoptosis   |       |          |
| <b>Pathway:</b>           | JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Apoptosis    |       |          |
| <b>Storage:</b>           | Powder  | -20°C | 3 years  |
|                           |   | 4°C   | 2 years  |
|                           | In solvent  | -80°C | 6 months |
|                           |   | -20°C | 1 month  |



### SOLVENT & SOLUBILITY

|   |  |                          |           |            |
|---|--|--------------------------|-----------|------------|
| <b>In Vitro</b>   | DMSO : 100 mg/mL (305.49 mM; Need ultrasonic)  |                          |           |            |
|   |  | Solvent<br>Concentration | Mass      |            |
|   |  |                          | 1 mg      | 5 mg       |
|   |  |                          | 10 mg     |            |
|   | <b>Preparing Stock Solutions</b>   | <b>1 mM</b>              | 3.0549 mL | 15.2746 mL |
|   | <b>5 mM</b>  | 0.6110 mL                | 3.0549 mL | 6.1099 mL  |
|   | <b>10 mM</b>   | 0.3055 mL                | 1.5275 mL | 3.0549 mL  |
| Please refer to the solubility information to select the appropriate solvent. |  |                          |           |            |
| <b>In Vivo</b>  | 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline<br>Solubility: ≥ 2.5 mg/mL (7.64 mM); Clear solution |                          |           |            |
|   | 2. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 2.5 mg/mL (7.64 mM); Clear solution                            |                          |           |            |

### BIOLOGICAL ACTIVITY

|                                     |  |  |
|-------------------------------------|--|--|
| <b>Description</b>                  | T-1-PMPA is a potent EGFR inhibitor with apoptotic properties. T-1-PMPA effectively inhibits EGFR <sup>WT</sup> and EGFR <sup>T790M</sup> , with IC <sub>50</sub> values of 86 nM and 561.73 nM, respectively <sup>[1]</sup> .   |  |
| <b>IC<sub>50</sub> &amp; Target</b> | EGFR <sup>WT</sup><br>86 nM (IC <sub>50</sub> )  | EGFR <sup>T790M</sup><br>561.73 nM (IC <sub>50</sub> ) |
| <b>In Vitro</b>                     | T-1-PMPA (0.312-10 μM; 24 h) shows significant suppression of the proliferation of HepG2 and MCF7 malignant cell lines, with IC <sub>50</sub> values of 3.51 μM and 4.13 μM, respectively <sup>[1]</sup> . In HepG2 cells, T-1-PMPA increases the proportion of cells in the early stage of apoptosis from 0.77 to 29.17%, the late stage of apoptosis from 0.17 to 8.81%, and the overall stage from 3.05 to 42.03%. Additionally, the percentage of necrotic cells increased to 4.05% compared to 2.21% in the control cells. The qRT- |  |

PCR analysis further supported the apoptotic effects by revealing significant increases in the levels of caspase-3 and caspase-9. T-1-PMPA controls the levels of TNF $\alpha$  and IL2 by 74 and 50%<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Viability Assay<sup>[1]</sup>

|                  |   |
|------------------|---|
| Cell Line:       | HepG2 and MCF7 malignant cell lines   |
| Concentration:   | 0.312 $\mu$ M, 0.625 $\mu$ M, 1.25 $\mu$ M, 2.5 $\mu$ M, 5 $\mu$ M, 10 $\mu$ M              |
| Incubation Time: | 24 h  |
| Result:          | Showed significant suppression of the proliferation of HepG2 and MCF7 malignant cell lines. |

## REFERENCES

[1]. Ibrahim H Eissa, et al. New Theobromine Apoptotic Analogue with Anticancer Potential Targeting the EGFR Protein: Computational and In Vitro Studies. ACS Omega. 2024 Mar 27;9(14):15861-15881.

**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