



# SZABO SCANDIC

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## Produktinformation



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Diagnostik & molekulare Diagnostik



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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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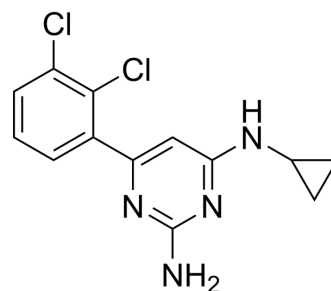
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## TH588

|                    |                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------|
| Cat. No.:          | HY-12814                                                                                         |
| CAS No.:           | 1609960-31-7                                                                                     |
| Molecular Formula: | C <sub>13</sub> H <sub>12</sub> Cl <sub>2</sub> N <sub>4</sub>                                   |
| Molecular Weight:  | 295.17                                                                                           |
| Target:            | DNA/RNA Synthesis                                                                                |
| Pathway:           | Cell Cycle/DNA Damage                                                                            |
| Storage:           | Powder    -20°C    3 years<br>4°C    2 years<br>In solvent   -80°C    2 years<br>-20°C    1 year |



### SOLVENT & SOLUBILITY

|                                                                               |                                                                                                                                          |                                                       |      |           |            |            |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------|-----------|------------|------------|
| In Vitro                                                                      | DMSO : 16 mg/mL (54.21 mM; Need ultrasonic and warming)                                                                                  |                                                       |      |           |            |            |
|                                                                               | Preparing Stock Solutions                                                                                                                | <div><div>Solvent</div><div>Concentration</div></div> | Mass | 1 mg      | 5 mg       | 10 mg      |
|                                                                               |                                                                                                                                          | 1 mM                                                  |      | 3.3879 mL | 16.9394 mL | 33.8788 mL |
|                                                                               |                                                                                                                                          | 5 mM                                                  |      | 0.6776 mL | 3.3879 mL  | 6.7758 mL  |
|                                                                               |                                                                                                                                          | 10 mM                                                 |      | 0.3388 mL | 1.6939 mL  | 3.3879 mL  |
| Please refer to the solubility information to select the appropriate solvent. |                                                                                                                                          |                                                       |      |           |            |            |
| In Vivo                                                                       | 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline<br>Solubility: ≥ 2.5 mg/mL (8.47 mM); Clear solution |                                                       |      |           |            |            |
|                                                                               | 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)<br>Solubility: ≥ 2.5 mg/mL (8.47 mM); Clear solution            |                                                       |      |           |            |            |
|                                                                               | 3. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 2.5 mg/mL (8.47 mM); Clear solution                            |                                                       |      |           |            |            |
|                                                                               |                                                                                                                                          |                                                       |      |           |            |            |

### BIOLOGICAL ACTIVITY

|                           |                                                                                                                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description               | TH588 is first-in-class nudix hydrolase family inhibitor that potently and selectively engage and inhibit the MTH1 (IC <sub>50</sub> = 5 nM).                                                      |
| IC <sub>50</sub> & Target | IC <sub>50</sub> : 5 nM (MTH1) <sup>[1]</sup>                                                                                                                                                      |
| In Vitro                  | TH588 (2-10μM; 7-10 days) selectively and effectively kills U2OS, HeLa, MDA-MB-231, MCF-7, SW480, and SW620 cells with IC <sub>50</sub> s of 1.38, 0.83, 1.03, 1.08, 1.72, 0.8 μM <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:       | U2OS, HeLa, MDA-MB-231, MCF-7, SW480, SW620, VH10, HDFn cells                                                                                                                                                               |
| Concentration:   | 2, 4, 6, 8, 10 $\mu$ M                                                                                                                                                                                                      |
| Incubation Time: | 7-10 days                                                                                                                                                                                                                   |
| Result:          | Selectively and effectively killed U2OS, HeLa, MDA-MB-231, MCF-7, SW480, and SW620 cells with IC <sub>50</sub> s of 1.38, 0.83, 1.03, 1.08, 1.72, 0.8 $\mu$ M, but was less toxic to several primary or immortalized cells. |

#### In Vivo

TH588 (30 mg/kg; s.c.; once daily for 35 days) reduces tumour growth in SW480 xenograft cancer model<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

|                 |                                                                          |
|-----------------|--------------------------------------------------------------------------|
| Animal Model:   | 5-6 weeks female SCID mice (SW480 xenograft cancer model) <sup>[1]</sup> |
| Dosage:         | 30 mg/kg                                                                 |
| Administration: | Subcutaneous injection; once daily for 35 days                           |
| Result:         | Reduced tumour growth in SW480 xenograft cancer model.                   |

## CUSTOMER VALIDATION

- J Mol Med (Berl). 2019 Aug;97(8):1183-1193.

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

## REFERENCES

[1]. Gad H, et al. MTH1 inhibition eradicates cancer by preventing sanitation of the dNTP pool. Nature. 2014 Apr 10;508(7495):215-21.

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

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