



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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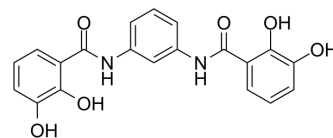
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## MST-312

|                    |                                                                                                    |
|--------------------|----------------------------------------------------------------------------------------------------|
| Cat. No.:          | HY-120145                                                                                          |
| CAS No.:           | 368449-04-1                                                                                        |
| Molecular Formula: | C <sub>20</sub> H <sub>16</sub> N <sub>2</sub> O <sub>6</sub>                                      |
| Molecular Weight:  | 380.35                                                                                             |
| Target:            | Telomerase                                                                                         |
| Pathway:           | Cell Cycle/DNA Damage                                                                              |
| Storage:           | Powder    -20°C    3 years<br>4°C    2 years<br>In solvent   -80°C    6 months<br>-20°C    1 month |



### SOLVENT & SOLUBILITY

|                                                                               |                                                                                                                                                   |                                                                      |           |            |            |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------|------------|------------|
| In Vitro                                                                      | DMSO : 75 mg/mL (197.19 mM; ultrasonic and warming and heat to 60°C)                                                                              |                                                                      |           |            |            |
|                                                                               | Preparing Stock Solutions                                                                                                                         | <div><div>Solvent</div><div>Mass</div><div>Concentration</div></div> | 1 mg      | 5 mg       | 10 mg      |
|                                                                               |                                                                                                                                                   | 1 mM                                                                 | 2.6292 mL | 13.1458 mL | 26.2916 mL |
|                                                                               |                                                                                                                                                   | 5 mM                                                                 | 0.5258 mL | 2.6292 mL  | 5.2583 mL  |
|                                                                               |                                                                                                                                                   | 10 mM                                                                | 0.2629 mL | 1.3146 mL  | 2.6292 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: ≥ 3.75 mg/mL (9.86 mM); Clear solution         |                                                                      |           |            |            |
|                                                                               | 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)<br>Solubility: 3.75 mg/mL (9.86 mM); Suspended solution; Need ultrasonic |                                                                      |           |            |            |
|                                                                               | 3. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 3.75 mg/mL (9.86 mM); Clear solution                                    |                                                                      |           |            |            |
|                                                                               |                                                                                                                                                   |                                                                      |           |            |            |

### BIOLOGICAL ACTIVITY

|                           |                                                                                                                                                                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description               | MST-312 is a telomerase inhibitor. MST-312 is a chemically modified derivative of green tea epigallocatechin gallate (EGCG). MST-312 can be used for the research of cancer, such as multiple myeloma (MM) <sup>[1]</sup> .                       |
| IC <sub>50</sub> & Target | telomeras <sup>[1]</sup>                                                                                                                                                                                                                          |
| In Vitro                  | MST-312 (2~8 μM; 0~72 hours; U-266 cells) reduces cellular viability in a dose dependent and time-dependent manner <sup>[1]</sup> .<br>MST-312 (2~8 μM; 48 hours; U-266 cells) induces cell apoptosis in a dose-dependent manner <sup>[1]</sup> . |

MST-312 (2  $\mu$ M; 48 hours; U-266 cells) up-regulates the pro-apoptotic gene Bax and down-regulates the anti-apoptotic gene Bcl-2 and suppresses the expression of c-Myc and hTERT genes<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:       | U-266 cells                                                                                                                                 |
| Concentration:   | 2~8 $\mu$ M                                                                                                                                 |
| Incubation Time: | 0~72 hours                                                                                                                                  |
| Result:          | The viability of U-266 cells was substantially decreased in a dose dependent and time-dependent manner, in response to exposure to MST-312. |

#### Apoptosis Analysis<sup>[1]</sup>

|                  |                                                    |
|------------------|----------------------------------------------------|
| Cell Line:       | U-266 cells                                        |
| Concentration:   | 2~8 $\mu$ M                                        |
| Incubation Time: | 48 hours                                           |
| Result:          | Induced cell apoptosis in a dose-dependent manner. |

#### RT-PCR<sup>[1]</sup>

|                  |                                                                                                                                                  |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Cell Line:       | U-266 cells                                                                                                                                      |
| Concentration:   | 2 $\mu$ M                                                                                                                                        |
| Incubation Time: | 48 hours                                                                                                                                         |
| Result:          | Up-regulated the pro-apoptotic gene Bax and down-regulated the anti-apoptotic gene Bcl-2 and suppressed the expression of c-Myc and hTERT genes. |

## REFERENCES

[1]. Ameri Z, et al. Telomerase inhibitor MST-312 induces apoptosis of multiple myeloma cells and down-regulation of anti-apoptotic, proliferative and inflammatory genes. Life Sci. 2019;228:66-71.

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

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