



# 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 HandelsgmbH

Quellenstraße 110, A-1100 Wien

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

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

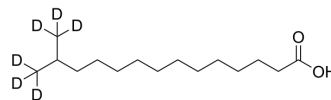
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

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

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

## 13-Methyltetradecanoic acid-d<sub>6</sub>

<b>Cat. No.:</b>	HY-131503S
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>24</sub> D <sub>6</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	248.43
<b>Target:</b>	Apoptosis; Isotope-Labeled Compounds
<b>Pathway:</b>	Apoptosis; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	13-Methyltetradecanoic acid-d <sub>6</sub> is a deuterated labeled 13-Methyltetradecanoic acid <sup>[1]</sup> . 13-Methyltetradecanoic acid (13-MTD), a saturated branched-chain fatty acid with potent anticancer effects. 13-Methyltetradecanoic acid induces apoptosis in many types of human cancer cells <sup>[2][3]</sup> .
<b>In Vitro</b>	<p>Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs<sup>[1]</sup>.</p> <p>13-Methyltetradecanoic acid (13-MTD; 0-140 µg/mL; 12-24 hours) inhibits cell viability and proliferation in human bladder cancer cells by inducing apoptosis<sup>[2]</sup>.</p> <p>13-Methyltetradecanoic acid (13-MTD; 70 µg/mL; 2-48 hours) treatments results in significant accumulation of cells with sub-G1 DNA content in a time-dependent manner, with the proportion of sub-G1 phase DNA content ranging from 9.25% to 85.3% over 2-48 hours<sup>[2]</sup>.</p> <p>13-Methyltetradecanoic acid (13-MTD; 70 µg/mL; 2-24 hours) down-regulates Bcl-2 and up-regulates Bax. This promotes mitochondrial dysfunction, leading to the release of cytochrome c from the mitochondria to the cytoplasm, as well as the proteolytic activation of caspases. 13-Methyltetradecanoic acid down-regulates AKT phosphorylation and activates phosphorylation of p38 and c-Jun N-terminal kinase (JNK)<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>13-Methyltetradecanoic acid (13-MTD; 70 mg/kg/day; oral gavage; daily; for 30 days) significantly suppresses tumor growth in a xenograft model<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### REFERENCES

- [1]. Tianxin Lin, et al. 13-Methyltetradecanoic acid induces mitochondrial-mediated apoptosis in human bladder cancer cells. *Urol Oncol.* May-Jun 2012;30(3):339-45.
- [2]. Qingqing Cai, et al. 13-methyltetradecanoic acid exhibits anti-tumor activity on T-cell lymphomas in vitro and in vivo by down-regulating p-AKT and activating caspase-3. *PLoS One.* 2013 Jun 7;8(6):e65308.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-216.

---

**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](mailto:tech@MedChemExpress.com)

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