



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

www.szabo-scandic.com

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



PRODUCT INFORMATION



Avobenzone- ^{13}C - d_3

Item No. 33367

Formal Name: 1-[4-(1,1-dimethylethyl)phenyl]-3-[4-(methoxy- ^{13}C - d_3)phenyl]-1,3-propanedione

Synonyms: BMDBM- ^{13}C - d_3 , Butyl Methoxydibenzoylmethane- ^{13}C - d_3

MF: $\text{C}_{19}^{[13\text{C}]}\text{H}_{19}\text{D}_3\text{O}_3$

FW: 314.4

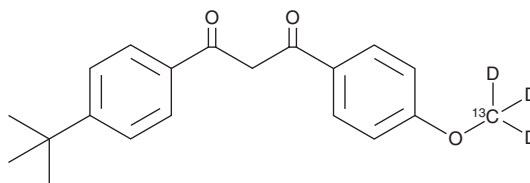
Chemical Purity: $\geq 98\%$ (Avobenzone)

Deuterium Incorporation: $\geq 99\%$ deuterated forms (d_1 - d_3); $\leq 1\%$ d_0

Supplied as: A solid

Storage: -20°C

Stability: ≥ 2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Avobenzone- ^{13}C - d_3 is intended for use as an internal standard for the quantification of avobenzone (Item No. 23836) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Avobenzone- ^{13}C - d_3 is supplied as a solid. A stock solution may be made by dissolving the avobenzone- ^{13}C - d_3 in the solvent of choice, which should be purged with an inert gas. Avobenzone- ^{13}C - d_3 is soluble in acetonitrile, DMSO, and dimethyl formamide.

Description

Avobenzone is a full-spectrum ultraviolet A (UVA) blocker.¹ It inhibits UVA-induced increases in melanin levels and tyrosinase activity in B16/F10 melanoma cells ($\text{IC}_{30\text{S}} = 21.94$ and $24.25 \mu\text{M}$, respectively).² Avobenzone ($30 \mu\text{M}$) also inhibits UVA-induced production of reactive oxygen species (ROS) and 8-hydroxy-2'-deoxyguanosine (8-OH-dG; Item No. 89320), as well as inhibits UVA-induced depletion of glutathione (GSH), in B16/F10 cells. It increases nuclear translocation of nuclear factor erythroid 2-related factor 2 (Nrf2) and upregulates the antioxidant response element (ARE) in UVA-irradiated B16/F10 cells when used at a concentration of $30 \mu\text{M}$. Formulations containing avobenzone have been used as sun protectants in sunscreen products.

References

1. Beasley, D.G. and Meyer, T.A. Characterization of the UVA protection provided by avobenzone, zinc oxide, and titanium dioxide in broad-spectrum sunscreen products. *Am. J. Clin. Dermatol.* **11**(6), 413-421 (2010).
2. Chaiprasongsuk, A., Onkoksoon, T., Pluemsamran, T., *et al.* Photoprotection by dietary phenolics against melanogenesis induced by UVA through Nrf2-dependent antioxidant responses. *Redox Biol.* **8**, 79-90 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/26/2021

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM