



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) 

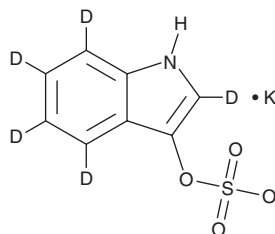
PRODUCT INFORMATION



Indoxyl Sulfate-d₅

Item No. 34511

CAS Registry No.: 1644451-34-2
Formal Name: 1H-indol-3-yl-2,4,5,6,7-d₅ sulfate, potassium salt
MF: C₈HD₅NO₄S • K
FW: 256.3
Chemical Purity: ≥95% (Indoxyl sulfate)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
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

Indoxyl sulfate-d₅ is intended for use as an internal standard for the quantification of indoxyl sulfate (Item No. 16926) 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).

Indoxyl sulfate-d₅ is supplied as a solid. A stock solution may be made by dissolving the indoxyl sulfate-d₅ in the solvent of choice, which should be purged with an inert gas. Indoxyl sulfate-d₅ is slightly soluble in DMSO and methanol.

Description

Indoxyl sulfate is a uremic toxin and a metabolite of tryptophan (Item No. 29600).¹ It is formed *via* sulfation of indole, an intermediate generated from tryptophan by intestinal bacteria, by the sulfotransferase (SULT) isoform 1A1 variant 2 (SULT1A1*2) in the liver.^{1,2} Indoxyl sulfate activates the aryl hydrocarbon receptor (AhR) in HepG2 40/6 hepatoma cells (EC₅₀ = 12.1 nM in a reporter assay).³ It also inhibits the organic anion transporter (OAT) isoforms OAT1 and OAT3 (K_is = 34.2 and 74.4 μM, respectively for the rat transporters) in S2 proximal tubule cells.⁴ Indoxyl sulfate (0.2 and 1 mM) increases superoxide anion and nitric oxide levels in isolated human mononuclear blood cells.⁵ It increases serum creatinine and blood urea nitrogen (BUN) levels in the 5/6 nephrectomized rat model of chronic renal failure when administered at a dose of 50 mg/kg.⁴

References

1. Niwa, T. Uremic toxicity of indoxyl sulfate. *Nagoya J. Med. Sci.* **72**(1-2), 1-11 (2010).
2. Banoglu, E. and King, R.S. Sulfation of indoxyl by human and rat aryl (phenol) sulfotransferases to form indoxyl sulfate. *Eur. J. Drug Metab. Pharmacokinet.* **27**(2), 135-140 (2002).
3. Schroeder, J.C., Dinatale, B.C., Murray, I.A., et al. The uremic toxin 3-indoxyl sulfate is a potent endogenous agonist for the human aryl hydrocarbon receptor. *Biochemistry* **49**(2), 393-400 (2010).
4. Enomoto, A., Takeda, M., Tojo, A., et al. Role of organic anion transporters in the tubular transport of indoxyl sulfate and the induction of its nephrotoxicity. *J. Am. Soc. Nephrol.* **13**(7), 1711-1720 (2002).
5. Pieniazek, A., Gwozdziński, L., Hikisz, P., et al. Indoxyl sulfate generates free radicals, decreases antioxidant defense, and leads to damage to mononuclear blood cells. *Chem. Res. Toxicol.* **31**(9), 869-875 (2018).

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, 06/21/2021

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