

Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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PRODUCT INFORMATION



K+

Indoxyl Sulfate (potassium salt)

Item No. 16926

CAS Registry No.:	2642-37-7	
Formal Name:	1H-indol-3-ol, 3-(hydrogen sulfate), monopotassium salt	H /
MF:	C ₈ H ₆ NO ₄ S ● K	Ń
FW:	251.3	
Purity:	≥98%	
UV/Vis.:	λ _{max} : 221, 281 nm	
Supplied as:	A crystalline solid	0-9
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 (potassium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the indoxyl sulfate (potassium salt) in the solvent of choice, which should be purged with an inert gas. Indoxyl sulfate (potassium salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of indoxyl sulfate (potassium salt) in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of indoxyl sulfate (potassium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of indoxyl sulfate (potassium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Indoxyl sulfate is a metabolite of tryptophan derived from dietary protein. Tryptophan is metabolized by intestinal bacteria into indole, which is absorbed into the blood and then further metabolized to indoxyl sulfate in the liver, which is normally excreted in urine. In chronic kidney disease patients where renal function is compromised, indoxyl sulfate can accumulate in serum as a uremic toxin, inducing oxidative stress and accelerating progression of the disease.¹ Indoxyl sulfate at 250 μ M can induce the activation of NF- κ B, promoting the expression of both TGF- β 1 and Smad3 expression in proximal tubular cells of rats, which is associated with profibrotic activity.²

References

- 1. Niwa, T. Uremic toxicity of indoxyl sulfate. Nagoya J. Med. Sci. 72(1-2), 1-11 (2010).
- 2. Shimizu, H., Yisireyili, M., Nishijima, F., et al. Indoxyl sulfate enhances p53-TGF-β1-Smad3 pathway in proximal tubular cells. Am. J. Nephrol. 37(2), 97-103 (2013).

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

SAFFTY 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.

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