Indoxyl Sulfate (potassium salt)
Item No. 16926

CAS Registry No.: 2642-37-7
Formal Name: 3-(hydrogen sulfate), 1H-indol-3-ol, monopotassium salt
MF: C₈H₆NO₄S • K
FW: 251.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λmax 221, 281 nm

Laboratory Procedures
For long term storage, we suggest that indoxyl sulfate (potassium salt) be stored as supplied at -20°C. It should be stable for at least two years.

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. Indoxyl sulfate (potassium salt) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. 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.

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. Indoxyl sulfate at 250 µM can induce the activation of NF-κB, promoting the expression of both TGF-β1 and Smad3 expression in proximal tubular cells of rats, which is associated with profibrotic activity.

References

Related Products
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