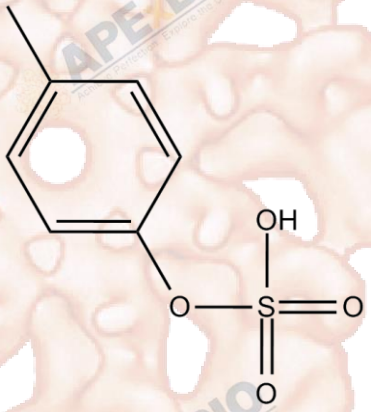
Product Data Sheet

p-Cresyl sulfate



Cat. No.: A8895

CAS No.: 3233-58-7

Formula: C7H8O4S

M.Wt: 188.20

Synonyms:

Target: Others

Pathway: Renal Diseases

Storage: Store at -20°CThe product is not stable in solution, please dissolve it immediately before use.

Solvent & Solubility

In Vitro

insoluble in EtOH; ⩾30.1 mg/mL in DMSO; ⩾50 mg/mL in H2O

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	5.3135 mL	26.5675 mL	53.1350 mL
5 mM	1.0627 mL	5.3135 mL	10.6270 mL
10 mM	0.5313 mL	2.6567 mL	5.3135 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Protein-bound uremic retention solute
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Human umbilical vein endothelial cells
Preparation method:	Limited solubility. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	24 h

	Applications:	Without and with HSA, 10 mug/mL, 25 mug/mL and 50 mug/mL p-cresol induce a decrease in endothelial cell proliferation by 21%, 38% and 54%, respectively. Without HSA, endothelial wound repair in monolayers treated with p-cresol is prominently lower than in cells treated with control medium. 10 mug/mL, 25 mug/mL and 50 mug/mL p-cresol reduce endothelial wound repair by 19%, 28% and 40%, respectively. With HSA, only 50 mug/mL p-cresol prominently blocks endothelial wound repair.
In Vivo	**Animal experiment**	
	Animal models:	Rat
	Dosage form:	Intravenously injection of p-cresol (10 mg/kg) in rats with normal and decreased renal function
	Applications:	P-cresol was injected in mice with normal and decreased renal function, and compared the results with those obtained for creatinine (60 mg/kg) under similar conditions. In rats with decreased renal function, p-cresol serum concentration displays a minimal decline, in contrast to rats with normal renal function. In rats with normal renal function, 21.0±10.0% of the injected p-cresol was excreted in urine. In rats with renal failure, the amount is 6.7±7.5%.
	Preparation method:	Dissolved in isotonic saline
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Potts DM, Peterson DG. "Identification of small molecule flavor compounds that contribute to the somatosensory attributes of bovine milk products." Food Chem. 2019 Oct 1;294:27-34.PMID:31126463

2. Shi Y, Zhang Y, et al. "Improved dialytic removal of protein-bound uremic toxins by intravenous lipid emulsion in chronic kidney disease rats." Nephrol Dial Transplant. 2019 May 9. pii: gfz079.PMID:31071223

3. Shi Y, Tian H, et al. "Effect of Ionic Strength, pH and Chemical Displacers on the Percentage Protein Binding of Protein-Bound Uremic Toxins." Blood Purif. 2018 Dec 18:1-10.PMID:30562731

4. Shi Y, Wang Y, et al. "Increasing the removal of protein-bound uremic toxins by liposome-supported hemodialysis."Artif Organs. 2018 Oct 30.PMID:30375673

See more customer validations on www.apexbt.com.

References

1. Dou L, Bertrand E, Cerini C, et al. The uremic solutes p-cresol and indoxyl sulfate inhibit endothelial proliferation and wound repair. Kidney international, 2004, 65(2): 442-451.

2. Lesaffer G, De Smet R, D'Heuvaert T et al. Comparative kinetics of the uremic toxin p-cresol versus creatinine in rats with and without renal failure. Kidney Int. 2003 Oct; 64(4):1365-73.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com