Product Data Sheet

Product Name: 3-CPs (3-Carbethoxypsoralen)
Cat. No.: GC33999

Chemical Properties

Cas. No.	20073-24-9		
SMILES	O=C(C1=CC2=CC3=C(OC=C3)C=C2OC1=O)OCC		
Formula	$C_{14}H_{10}O_5$	M.Wt	258.23
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	3-CPs (3-Carbethoxypsoralen)		

Protocol

Kinase experiment:

To measure the inhibitory effect of releaseing type 3-CPs on bacteria killing, an OPKA is performed with the addition of culture supernatant or mouse serum obtained at 24 h following i.p. injection with 103 CFU of the S. pneumoniae WU2 strain. In each well, 10 µL of diluted rabbit serum is mixed with 10 µL of strain WU2 (1,000 CFU) and 10 µL of culture supernatant or mouse serum for 30 min at room temperature before HL-60 cells and complement are added. The percent inhibition of bacterial killing is compared to that with the OPKA with the addition of ΔCPS WU2 culture supernatant or naive mouse serum containing no 3-CPs[2].

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References:

[1]. Silva EB, et al. Modulation of the UVB-induced lethality by furocoumarins in Staphylococcus aureus. J Photochem Photobiol B. 2014 Jan 5;130:260-3. doi: 10.1016/j.jphotobiol.2013.11.012.
[2]. Choi EH, et al. Capsular Polysaccharide (CPS) Release by Serotype 3 Pneumococcal Strains Reduces the Protective Effect of Anti-Type 3 CPS Antibodies.

Background

3-CPs is a serotype capsular polysaccharide which can interfere with antibody-mediated bacterial killing.

3-CPs displays protective effect against UVB damage in all concentrations tested[1]. About 50% inhibition of bacterial killing is observed when 12 ng of purified type 3 CPS is added to the OPKA. The addition of 30 µL of mouse serum post-i.p. infection with WU2 (containing 0.4 to 0.7 µg/mL released type 3 CPS) shows 26% to 52% inhibition of bacterial killing, comparable to what is observed when an equivalent amount of purified CPS is added[2].

[1]. Silva EB, et al. Modulation of the UVB-induced lethality by furocoumarins in Staphylococcus aureus. J Photochem Photobiol B. 2014 Jan 5;130:260-3. doi: 10.1016/j.jphotobiol.2013.11.012. [2]. Choi EH, et al. Capsular Polysaccharide (CPS) Release by Serotype 3 Pneumococcal Strains Reduces the Protective Effect of Anti-Type 3 CPS Antibodies.