

Short Note

7-Hydroxy-8-acetylcoumarin *N*-Phenylsulfonylhydrazone

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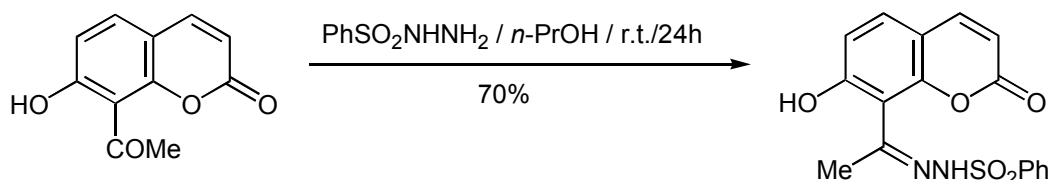
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As part of a research programme targeting novel molecules derived from *o*-hydroxyaryl ketone hydrazones[1] we synthesised 7-hydroxy-8-acetylcoumarin phenylsulfonylhydrazone. It is well known than coumarins exhibit a variety of pharmacological properties. Among these properties, their cytotoxic effects have been most extensively investigated [2]. Sulfonyl hydrazone derivatives have been also found to possess anticancer properties [3]. Thus, the combination of coumarin and sulfonyl hydrazone moieties in one molecule could lead to an interesting anticancer agent.



7-Hydroxy-8-acetylcoumarin was prepared according to the literature method [4] whereas, commercially available phenylsulfonyl hydrazide was supplied by Aldrich. Phenylsulfonyl hydrazide (0.42 g, 2.45 mmol) was added to a solution of 7-hydroxy-8-acetylcoumarin (0.5 g, 2.45 mmol) in 1-propanol (15 mL). The reaction mixture was magnetically stirred at r.t. for 24 hours. The precipitate, which was formed, was initially filtered, then washed with 5mL diethyl ether and finally dried overnight to afford the desired 7-hydroxy-8-acetylcoumarin phenylsulfonylhydrazone as white crystals

(1.38 g, 70 %). The product was identified by its ^1H NMR, ^{13}C NMR and MS without further purification.

M.p. 196-197 °C.

^1H NMR (400 MHz, DMSO- d_6): 2.02 (s, 3H), 6.20-6.23 (d, 1H, $J=9.6$ Hz), 6.86-6.88 (d, $J=8.4$ Hz, 1H), 7.54-7.64 (m, 4H), 7.66-7.84(m, 2H), 7.93-7.95 (d, $J=9.6$ Hz, 1H), 10.22 (s, 1H), 10.81 (s, 1H).

^{13}C NMR (100 MHz, DMSO- d_6): 23.6, 109.6, 111.7, 111.8, 112.6, 127.1, 129.0, 129.8, 132.6, 139.8, 143.4, 147.6, 152.1, 157.4, 160.0.

MS m/z (ESI+) : Calcd. for $\text{C}_{17}\text{H}_{14}\text{N}_2\text{O}_5\text{S}$ 739.11391 $[2\text{M}+\text{Na}]^+$, 381.05156 $[\text{M}+\text{Na}]^+$. Found: 739.11366 $[2\text{M}+\text{Na}]^+$, 381.05132 $[\text{M} + \text{Na}]^+$

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