
Synthesis and Antitumor Activity of 5-Phenyl-1,3-thiazole-4-sulfonamide Derivatives

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Abstract—A method for the synthesis of 5-phenyl-1,3-thiazole-4-sulfonyl chloride was developed based on the cyclization of ethyl 2-{[1-(benzylsulfanyl)-2-oxo-2-phenylethyl]amino}-2-oxoacetate obtained from available reagents under the action of the Lawesson's reagent and oxidative chlorination of the intermediate benzyl 5-phenyl-1,3-thiazol-4-ylsulfide. The resulting sulfonyl chloride was converted into a series of 5-phenyl-1,3-thiazole-4-sulfonamide derivatives for which *in vitro* antitumor activity screening studies were performed on 60 cancer cell lines.

Keywords: 1,3-thiazole, sulfonyl chloride, sulfonamide, antitumor activity

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