

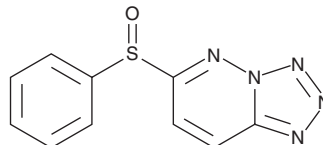
# PRODUCT INFORMATION



**Ro 106-9920**

Item No. 15373

**CAS Registry No.:** 62645-28-7  
**Formal Name:** 6-(phenylsulfinyl)-tetrazolo[1,5-b]pyridazine  
**MF:** C<sub>10</sub>H<sub>7</sub>N<sub>5</sub>OS  
**FW:** 245.3  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 205, 231 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

Ro 106-9920 is supplied as a crystalline solid. A stock solution may be made by dissolving the Ro 106-9920 in the solvent of choice. Ro 106-9920 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of Ro 106-9920 in these solvents is approximately 20 and 25 mg/ml, respectively.

Ro 106-9920 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Ro 106-9920 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ro 106-9920 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

Transcriptional activation by NF-κB is limited by IκBα binding, which masks the NF-κB nuclear localization signal that initiates nuclear translocation. Cytokines trigger a signaling cascade of kinases that target IκBα for degradation, enabling NF-κB to promote gene expression. Because NF-κB regulates the transcription of inflammatory mediators, blocking its signaling activity is regarded as an effective means to treat inflammatory diseases. Ro 106-9920 is a small molecule inhibitor of NF-κB-dependent expression of TNF-α, interleukin-1β, and interleukin-6 (IC<sub>50</sub> < 1 μM in human peripheral blood mononuclear cells).<sup>1</sup> It selectively inhibits the ubiquitination of activated IκBα with an IC<sub>50</sub> value of 2.3 μM demonstrating little activity against the ubiquitin-activating enzyme E1 (IC<sub>50</sub>s >100 μM), the ubiquinating-conjugating enzyme E2UBCH7, nonspecific ubiquitination of cellular proteins, and 97 other molecular targets.<sup>1</sup> In two different models of acute inflammation, Ro 106-9920 at 10-100 mg/kg has been shown to dose-dependently inhibit cytokine production in rat.<sup>1</sup>

## Reference

1. Swinney, D.C., Xu, Y.Z., Scarafia, L.E., *et al.* A small molecule ubiquitination inhibitor blocks NF-κB-dependent cytokine expression in cells and rats. *J. Biol. Chem.* **277**(26), 23573-23581 (2002).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

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