

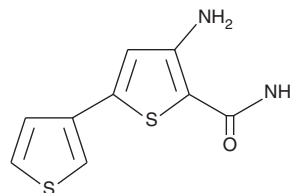
# PRODUCT INFORMATION



## SC-514

Item No. 10010267

**CAS Registry No.:** 354812-17-2  
**Formal Name:** 4-amino-[2,3'-bithiophene]-5-carboxamide  
**Synonym:** GK 01140  
**MF:** C<sub>9</sub>H<sub>8</sub>N<sub>2</sub>OS<sub>2</sub>  
**FW:** 224.3  
**Purity:** ≥98%  
**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

SC-514 is supplied as a crystalline solid. A stock solution may be made by dissolving the SC-514 in the solvent of choice, which should be purged with an inert gas. SC-514 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of SC-514 in these solvents is approximately 25 mg/ml.

SC-514 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SC-514 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SC-514 has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

SC-514 is a selective and reversible inhibitor of IκB kinase 2 (IKK2) (IC<sub>50</sub> = 3-12 μM) that displays greater than 10-fold selectivity over 28 other kinases, including JNK, p38, MK2, and ERK.<sup>1,2</sup> In synovial fibroblasts stimulated with interleukin (IL)-1β, SC-514 attenuates NF-κB-mediated expression of IL-6, IL-8, and cyclooxygenase-2 (IC<sub>50</sub>s = 20, 20, and 8 μM, respectively).<sup>1</sup> SC-514 also reduces NF-κB-mediated expression of other genes, including iNOS in LPS-stimulated smooth muscle cells and TLR2 in TNF-activated astrocytes.<sup>3,4</sup>

### References

1. Kishore, N., Sommers, C., Mathialagan, S., *et al.* A selective IKK-2 inhibitor blocks NF-κB-dependent gene expression in interleukin-1β-stimulated synovial fibroblasts. *J. Biol. Chem.* **278(35)**, 32861-32871 (2003).
2. Baxter, A., Brough, S., Cooper, A., *et al.* Hit-to-lead studies: The discovery of potent, orally active, thiophenecarboxamide IKK-2 inhibitors. *Bioorg. Med. Chem. Lett.* **14(11)**, 2817-2822 (2004).
3. Gomez, A.B., MacKenzie, C., Paul, A., *et al.* Selective inhibition of inhibitory kappa B kinase-β abrogates induction of nitric oxide synthase in lipopolysaccharide-stimulated rat aortic smooth muscle cells. *Br. J. Pharmacol.* **146(2)**, 217-225 (2005).
4. Phulwani, N.K., Esen, N., Syed, M.M., *et al.* TLR2 expression in astrocytes is induced by TNF-α and NF-κB-dependent pathways. *J. Immunol.* **181(6)**, 3841-3849 (2008).

#### 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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