

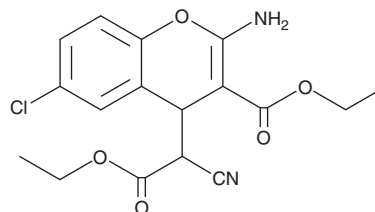
# PRODUCT INFORMATION



## SC-79

Item No. 14972

**CAS Registry No.:** 305834-79-1  
**Formal Name:** 2-amino-6-chloro- $\alpha$ -cyano-3-(ethoxycarbonyl)-4H-1-benzopyran-4-acetic acid, ethyl ester  
**MF:** C<sub>17</sub>H<sub>17</sub>ClN<sub>2</sub>O<sub>5</sub>  
**FW:** 364.8  
**Purity:**  $\geq$ 95%  
**UV/Vis.:**  $\lambda_{\max}$ : 229, 273 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

SC-79 is supplied as a crystalline solid. A stock solution may be made by dissolving the SC-79 in the solvent of choice, which should be purged with an inert gas. SC-79 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SC-79 in these solvents is approximately 30 mg/ml.

SC-79 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SC-79 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. SC-79 has a solubility of approximately 0.16 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

SC-79 is an activator of Akt that blocks its membrane translocation while allowing its phosphorylation, in the cytosol, by upstream kinases.<sup>1</sup> For example, both Thr<sup>308</sup> and Ser<sup>473</sup> on Akt are phosphorylated in serum starved HeLa cells treated for 1 hour with insulin growth factor and SC-79 (4  $\mu$ g/ml).<sup>1</sup> SC-79 permits phosphorylation and activation of all isoforms of Akt, it is active in multiple cell types, and works in both receptor tyrosine kinase- and G protein-coupled receptor-mediated signaling.<sup>1</sup> SC-79 has been used to elucidate the role of Akt signaling in neuronal survival, glucose-mediated apoptosis in podocytes, and miR-221-regulated cancer cell proliferation.<sup>1-3</sup>

### References

- Jo, H., Mondal, S., Tan, D., *et al.* Small molecule-induced cytosolic activation of protein kinase Akt rescues ischemia-elicited neuronal death. *Proc. Nat. Acad. Sci. USA* **109(26)**, 10581-10586 (2012).
- Li, C., and Siragy, H. M. (Pro)renin receptor regulates autophagy and apoptosis in podocytes exposed to high glucose. *Am. J. Physiol. Endocrinol. Metab.* **309(3)**, E302-E310 (2015).
- Yang, W., Yang, Y., Xia, L., *et al.* MiR-221 promotes capan-2 pancreatic ductal adenocarcinoma cells proliferation by targeting PTEN-Akt. *Cell. Physiol. Biochem.* **38(6)**, 2366-2374 (2016).

#### 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.

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