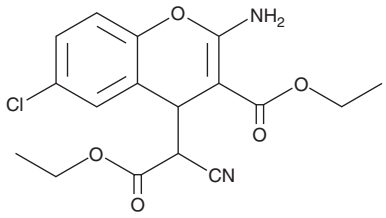
PRODUCT INFORMATION

SC-79

Item No. 14972

CAS Registry No.:	305834-79-1
Formal Name:	2-amino-6-chloro-α-cyano-3-(ethoxycarbonyl)-4H-1-benzopyran-4-acetic acid, ethyl ester
MF:	$C_{17}H_{17}ClN_2O_5$
FW:	364.8
Purity:	≥95%
UV/Vis.:	λ_{max}: 229, 273 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

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.[1] For example, both Thr^{308} and Ser^{473} on Akt are phosphorylated in serum starved HeLa cells treated for 1 hour with insulin growth factor and SC-79 (4 µg/ml).[1] 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.[1] 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.[1-3]

References

1. 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).
2. 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).
3. 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).

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