

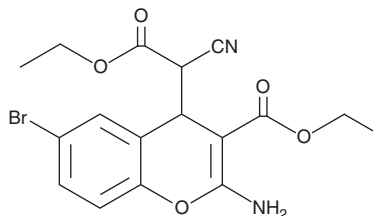
# PRODUCT INFORMATION



## HA-14-1

Item No. 14876

**CAS Registry No.:** 927635-64-1  
**Formal Name:** ( $\alpha$ R,4R)-*rel*-2-amino-6-bromo- $\alpha$ -cyano-3-(ethoxycarbonyl)-4H-1-benzopyran-4-acetic acid, ethyl ester  
**MF:** C<sub>17</sub>H<sub>17</sub>BrN<sub>2</sub>O<sub>5</sub>  
**FW:** 409.2  
**Purity:**  $\geq$ 95% (mixture of isomers)  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 230, 274 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

HA-14-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the HA-14-1 in the solvent of choice, which should be purged with an inert gas. HA-14-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of HA-14-1 in these solvents is approximately 20, 16, and 5 mg/ml, respectively.

HA-14-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HA-14-1 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. HA-14-1 has a solubility of approximately 0.1 mg/ml in a 1:9 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

HA-14-1 is a small molecule that binds the surface pocket of Bcl-2 proteins ( $IC_{50} = \sim 9 \mu\text{M}$ ) and induces apoptosis by interfering with its interaction with the Bak peptide and activating Apaf-1 and caspase-9 and -3.<sup>1</sup> It can also bind to the antiapoptotic Bcl-2 proteins Bcl-xl and Bcl-W.<sup>2</sup> HA-14-1 has been shown to induce apoptosis of human acute myeloid leukemia (HL-60) cells (50  $\mu\text{M}$  induces 90% loss of viability).<sup>1</sup>

### References

1. Wang, J.L., Liu, D., Zhang, Z.J., *et al.* Structure-based discovery of an organic compound that binds Bcl-2 protein and induces apoptosis of tumor cells. *Proc. Natl. Acad. Sci. USA* **97**(13), 7124-7129 (2000).
2. Azmi, A.S. and Mohammad, R.M. Non-peptidic small molecule inhibitors against Bcl-2 for cancer therapy. *J. Cell Physiol.* **218**(1), 13-21 (2009).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/21/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM