

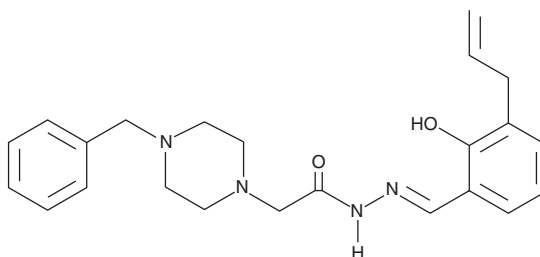
Product Information



PAC-1

Catalog No. 10009317

CAS Registry No.: 315183-21-2
Formal Name: 4-(phenylmethyl)-[[2-hydroxy-3-(2-propenyl)phenyl]methylene]hydrazide, 1-piperazineacetic acid
Synonym: Procaspase-activating Compound 1
MF: C₂₃H₂₈N₄O₂
FW: 392.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that procaspase-activating compound 1 (PAC-1) be stored as supplied at -20°C. It will be stable for at least one year.

PAC-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the PAC-1 in an organic solvent purged with an inert gas. PAC-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PAC-1 in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

PAC-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PAC-1 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. PAC-1 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Apoptosis can be induced when procaspase-3 is activated and converted to caspase-3. PAC-1 is a procaspase-3 activator and a potential drug treatment in cancer cell lines with elevated levels of procaspase-3.¹ PAC-1's effectiveness was found to be directly proportional to the procaspase-3 concentration present in cells. In cancer cells, PAC-1 had an IC₅₀ value of 3 nM for induction of cell death, whereas in cells from adjacent normal tissue IC₅₀ values of 3.2-8.5 μM were observed.¹

Reference

1. Putt, K.S., Chen, G.W., Pearson, J.M., *et al.* Small-molecule activation of procaspase-3 to caspase-3 as a personalized anticancer strategy. *Nature Chemical Biology* **2**(10), 543-550 (2006).

Cayman Chemical

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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