

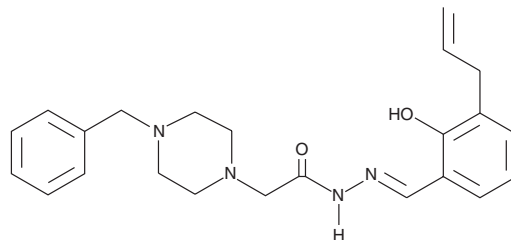
PRODUCT INFORMATION



PAC-1

Item No. 10009317

CAS Registry No.: 315183-21-2
Formal Name: 4-(phenylmethyl)-1-piperazineacetic acid, 2-[[2-hydroxy-3-(2-propen-1-yl)phenyl]methylene]hydrazide
Synonym: Procaspase-activating Compound 1
MF: C₂₃H₂₈N₄O₂
FW: 392.5
Purity: ≥98%
UV/Vis.: λ_{max}: 283, 293, 328 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

PAC-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the PAC-1 in the solvent of choice, which should be 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.

Description

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).

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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