

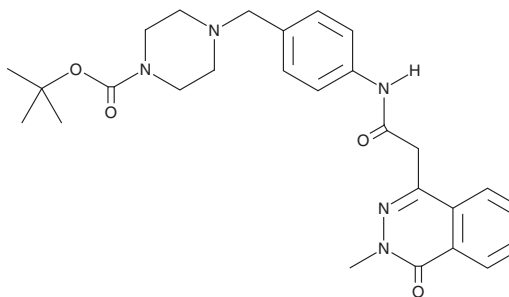
# PRODUCT INFORMATION



PH-002

Item No. 27739

**CAS Registry No.:** 1311174-68-1  
**Formal Name:** 4-[[4-[[2-(3,4-dihydro-3-methyl-4-oxo-1-phthalazinyl)acetyl]amino]phenyl]methyl]-1-piperazinecarboxylic acid, 1,1-dimethylethyl ester  
**MF:** C<sub>27</sub>H<sub>33</sub>N<sub>5</sub>O<sub>4</sub>  
**FW:** 491.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 248 nm  
**Supplied as:** A 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

PH-002 is supplied as a solid. A stock solution may be made by dissolving the PH-002 in the solvent of choice, which should be purged with an inert gas. PH-002 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PH-002 in ethanol and DMSO is approximately 10 mg/ml and approximately 15 mg/ml in DMF.

PH-002 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PH-002 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PH-002 has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

PH-002 is an inhibitor of the interaction between the amino- and carboxy-terminal domains of apolipoprotein E4 (ApoE4; IC<sub>50</sub> = 116 nM in a FRET reporter assay for domain interaction).<sup>1,2</sup> It restores intracellular trafficking of ApoE4 to the endoplasmic reticulum and Golgi apparatus in Neuro-2a cells expressing EGFP-ApoE4 or EGFP-ApoE4-R61T, a mutation that impairs ApoE4 domain interactions, when used at a concentration of 100 nM. PH-002 also prevents impairments in neurite outgrowth and dendritic spine development induced by expression of ApoE4 in Neuro-2a cells. It restores levels of mitochondrial complex IV subunit 1 in Neuro-2a cells expressing ApoE4 (EC<sub>50</sub> = 39 nM) and increases mitochondrial motility in PC12 cells expressing ApoE4 (EC<sub>50</sub> = <1 nM).<sup>1</sup>

## References

1. Chen, H.-K., Liu, Z., Meyer-Franke, A., *et al.* Small molecule structure correctors abolish detrimental effects of apolipoprotein E4 in cultured neurons. *J. Biol. Chem.* **287**(8), 5253-5266 (2012).
2. Brodbeck, J., McGuire, J., Liu, Z., *et al.* Structure-dependent impairment of intracellular apolipoprotein E4 trafficking and its detrimental effects are rescued by small-molecule structure correctors. *J. Biol. Chem.* **286**(19), 17217-17226 (2011).

### 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

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