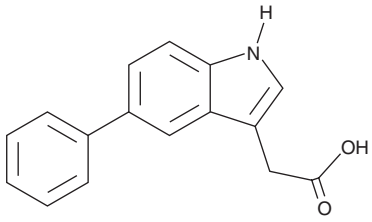
PRODUCT INFORMATION

5-Ph-IAA

Item No. 38161

CAS Registry No.:	168649-23-8
Formal Name:	5-phenyl-1H-indole-3-acetic acid
MF:	$C_{16}H_{13}NO_2$
FW:	251.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 253 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

5-Ph-IAA is supplied as a solid. A stock solution may be made by dissolving the 5-Ph-IAA in the solvent of choice, which should be purged with an inert gas. 5-Ph-IAA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 5-Ph-IAA in these solvents is approximately 33, 20, and 16 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 5-Ph-IAA can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 5-Ph-IAA in PBS (pH 7.2) is approximately 0.20 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

5-Ph-IAA is a phenylic substituted indole and ligand used for bump and hole, a technique used to study single protein isoforms when familial homology would interfere with other isoform-selective approaches.[1,2] It activates a bump-and-hole-modified protein, transport inhibitor response 1 (TIR1), which forms a PROTAC-associated complex that targets and degrades sister chromatid cohesion 1 (RAD21) and induces cell cycle arrest at the G_2 or M phase in *Arabidopsis* when used at a concentration of 1 µM.[2] Intraperitoneal administration of 5-Ph-IAA (1, 3, or 10 mg/kg per day) reduces tumor growth *via* the same process by targeting and degrading bromodomain-containing protein 4 (BRD4) in an HCT116 colorectal cancer xenograft mouse model.

References

1. Islam, K. The bump-and-hole tactic: Expanding the scope of chemical genetics. *Cell Chem. Biol.* **25(10)**, 1171-1184 (2018).
2. Yesbolatova, A., Saito, Y., Kitamoto, N., *et al.* The auxin-inducible degron 2 technology provides sharp degradation control in yeast, mammalian cells, and mice. *Nat. Commun.* **11(1)**, 5701 (2020).

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