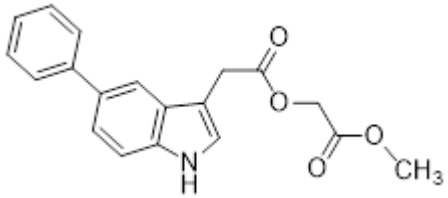
5-Ph-IAA-AM: Membrane-Permeable Prodrug-type Inducer for Auxin Inducible Degron 2 System

Product code	30-004
Size	5 mg
Storage	Ship at ambient temperature or 4 °C. Make stock solution as described below, aliquot and store at –20 °C.
Product name	5-Ph-IAA-AM
Chemical name	5-Phenyl-1H-indole-3-acetic acid acetoxymethyl ester
Chemical Formula	$C_{19}H_{17}NO_4$
Molecular Weight	323.34
Molecular structure of 5-Ph-IAA-AM Membrane-Permeable Prodrug-type Inducer for Auxin Inducible Degron 2 system	

Stock solution: Make 50 mM stock solution by resolving 5 mg 5-Ph-IAA-AM in 310 µL of DMSO. The 5-Ph-IAA-AM solution should be stored below –20 °C until use.

Usage: 5-Ph-IAA-AM is a membrane-permeable prodrug, which releases 5-Ph-IAA after hydrolyzation by intracellular esterase. 5-Ph-IAA-AM efficiently induces degradation of mAID-fused proteins in the eggs of *Caenorhabditis elegans* expressing AtTIR1(F79G). For inducing degradation in the eggs of *Caenorhabditis elegans*, use a stock solution dissolved in DMSO and apply at the final concentration of 50 µM.

This product is to be used for research purpose only, not in human.

References:

1. Negishi, T., Kitagawa, S., Horii, N., Tanaka, T., Haruta, N., Sugimoto, A., Sawa, H., Hayashi, KI., Harata, M. and Kanemaki, MT. The auxin-inducible degron 2 (AID2) system enables controlled protein knockdown during embryogenesis and development in *Caenorhabditis elegans*. Genetics, 2021 Dec 2;iyab218. PMID: 34865044
2. Yesbolatova, A., Saito, Y., Kitamoto, N., Makino-Itou, H., Ajima, R., Nakano, R., Nakaoka, H., Fukui, K., Gamo, K., Tominari, Y., Takeuchi, H., Saga, Y., Hayashi, KI. and Kanemaki, MT. The auxin-inducible degron 2 technology provides sharp degradation control in yeast, mammalian cells, and mice. Nature Communications, 11, 1-30 (2020). PMID: 33177522

BioAcademia,Inc. Tel. 81-6-6877-2335 Fax. 81-6-6877-2336 info@bioacademia.co.jp https://www.bioacademia.co.jp/en/

SAFETY DATA SHEET

1. IDENTIFICATION

Product name: 5-Ph-IAA-AM

Chemical name: 5-Phenyl-1H-indole-3-acetic acid acetoxymethyl ester

Product code: 03-004

Supplier: BioAcademia Inc.

Address: North Building, Research Institute for Microbial Diseases, Osaka University, 3-1 Yamadaoka, Suita, Osaka 565-0871, Japan

Telephone: 81-6-6877-2335 Fax: 81-6-6877-2336

E-mail: info@bioacademia.co.jp

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture: Substance

PHYSICAL HAZARDS: Not classified

HEALTH HAZARDS: Not classified

ENVIRONMENTAL HAZARDS: Not classified

Label elements

Pictograms or hazard symbols: None

Signal word: No signal word

Hazard statements: None

Precautionary statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Substance

Chemical Formula: $C_{19}H_{17}NO_4$

Molecular Weight: 323.34

Notice Through Official Gazettes Reference Number

ENCS: Not Listed

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion: Get medical advice/attention if you feel unwell. Rinse mouth.

Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.

Specific hazards arising from the chemical: Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.

6. HANDLING AND STORAGE

Precautions for safe handling

Handling is performed in a well-ventilated place. Wear suitable protective equipment.
Prevent dispersion of dust. Wash hands and face thoroughly after handling.
Use a local exhaust if dust or aerosol is generated.

Advice on safe handling: Avoid contact with skin, eyes and clothing

7. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust as possible so that workers should not be exposed directly. Also, install a safety shower and eye bath.

Control parameters: Not set up

Personal protective equipment

Respiratory protection:	Dust respirator. Follow local and national regulations
Hand protection:	Protective gloves
Eye protection:	Safety glasses
Skin and body protection:	Protective clothing

8. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Solid
Form:	Paste
Color:	Colorless to Pale yellow
Odor:	No data available
pH:	No data available
Flammability or explosive limits:	
Lower:	No data available
Upper:	No data available
Relative density:	No data available

Solubility(ies): dissolved well in methanol, acetone, DMSO, and ethanol

9. STABILITY AND REACTIVITY

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Chemical stability: Stable under proper conditions.

Possibility of hazardous reactions: No special reactivity has been reported.

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)

10. TOXICOLOGICAL INFORMATION

Acute Toxicity: No data available

Skin corrosion/irritation: No data available

Serious eye damage/irritation: No data available

Germ cell mutagenicity: No data available

Carcinogenicity:

IARC = No data available

NTP = No data available

Reproductive toxicity: No data available

11. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: No data available

Crustacea: No data available

Algae: No data available

Persistence / degradability: No data available

Bioaccumulative potential(BCF): No data available

Mobility in soil

Log Pow: No data available

Soil adsorption (Koc): No data available

Henry's Law constant(PaM3/mol): No data available

12. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

13. TRANSPORT INFORMATION

Hazards Class: Does not correspond to the classification standard of the United Nations

UN-No: Not listed

14. REGULATORY INFORMATION

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No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, or have known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

15. OTHER INFORMATION

This MSDS is correct to the best of our knowledge at the date of publication but does not purport to be all-inclusive and shall be used only as a guide. It must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The burden of safe use of this material rests entirely with the user. Bioacademia Inc. shall not be held liable for any injury or damage resulting from handling or contact with the above product.

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