

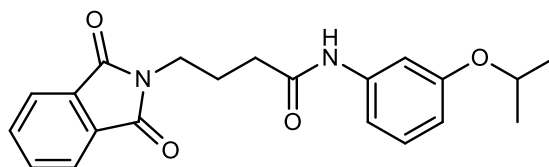
**Takeimide: selective inhibitor of auxin-inactivating GH3 enzymes.**

30-005      50 mg

**Shipping and Storage:** Ship at ambient temperature or at 4 °C. Make stock solution as described below, aliquot and store at -20 °C.

**Product name:**                      Takeimide  
**Chemical name:**                    4-(1,3-dioxoisindolin-2-yl)-N-(3-isopropoxyphenyl)butanamide  
**Chemical Formula:**                C<sub>21</sub>H<sub>22</sub>N<sub>2</sub>O<sub>4</sub>  
**Molecular Weight:**                366.41

**Molecular structure of Takeimide, selective inhibitor of auxin-inactivating GH3 enzymes**



**Stock solution:** Make 100 mM stock solution by resolving 10 mg Takeimide in 273 µL of DMSO. Takeimide solution should be stored below -20 °C until use.

**Usage:** Takeimide is selective inhibitor of auxin-inactivating GH3 enzyme that catalyze the conversion of indole 3-acetic acid (IAA) to IAA-amino acid conjugate. Takeimide induces the accumulation of endogenous IAA by inhibiting auxin-inactivating GH3 enzymes in planta, thus, results in the high-auxin phenotypes in various plants at the concentration of 1 - 20 µM.

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

**References:**

Chemical inhibition of auxin inactivation pathway uncovers the roles of metabolic turnover in auxin homeostasis, Fuku K. *et al* , Proc Natl Acad Sci U S A. 2022Aug9;119(32): e2206869119.  
PMID: 35914172

## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION

**Product name:** Kakeimide  
**Chemical name:** 4-(1,3-dioxoisindolin-2-yl)-N-(3-isopropoxyphenyl)butanamide  
**Product code:** 30-005  
**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:**  $C_{21}H_{22}N_2O_4$   
**Molecular Weight:** 366.41  
**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 will be 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 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:** powder

**Color:** Colorless

**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

**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 (NO<sub>x</sub>)

#### 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 (K<sub>oc</sub>):** No data available  
**Henry's Law constant(PaM<sup>3</sup>/mol):** No data available

#### 12. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local 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

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 from contact with the above product.

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