

# Bisindolylmaleimide I, Hydrochloride

✓ 500 µg

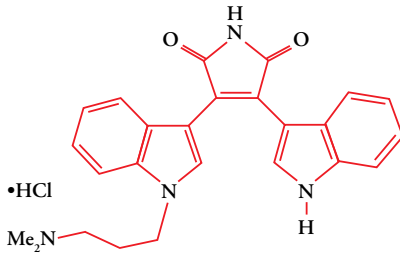
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New 01/08

This product is for *in vitro* research use only and is not intended for use in humans or animals.

**Background:** Bisindolylmaleimide I (BIS) is a potent inhibitor of PKC (1,2). *In vitro* the IC<sub>50</sub> of BIS is 10-20 nM for PKCα/β/γ and 100-200 nM for PKCδ/ε isoforms. The *in vitro* IC<sub>50</sub> for PKCζ is about 6 µM, indicating that BIS is a very weak inhibitor for this isoform. In *in vivo* cellular assays the IC<sub>50</sub> of BIS for PKC is between 0.2-2 µM (1,3).

**Molecular Formula:** C<sub>25</sub>H<sub>24</sub>N<sub>4</sub>O<sub>2</sub>·HCl



**Molecular Weight:** 448.95 Da

**Directions For Use:** Bisindolylmaleimide I is supplied as 500 µg powder. Store at or below -20°C. Before use, dissolve powder in 0.28 ml DMSO to make a 4 mM bisindolylmaleimide I stock solution. For working concentrations of 2 µM-4 µM, dilute DMSO stock 1:2000 to 1:1000. Treat cells with the desired concentration for 30 minutes. Bisindolylmaleimide I is more stable as a powder than in solution; it is therefore recommended to dissolve as close as possible prior to use. Store solution at or below -20°C.

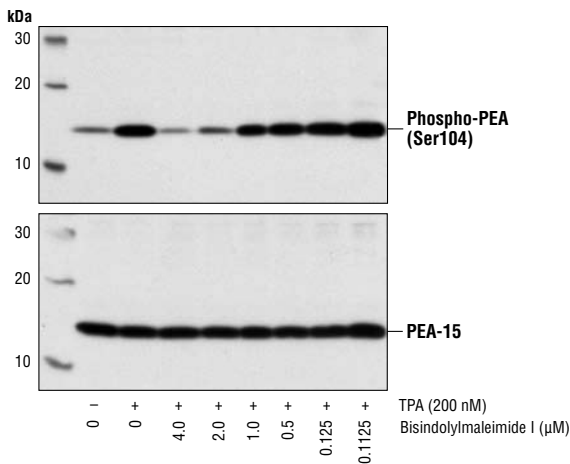
**Background References:**

- (1) Toullec, D. et al. (1991) *J. Biol. Chem.* 266, 15771-15781.
- (2) Martiny-Baron, G. et al. (1993) *J. Biol. Chem.* 268, 9194-9197.
- (3) Heikkilä, J. et al. (1993) *Biochem. Biophys. Res. Commun.* 197, 1185-1193.

**Storage:** Store tightly sealed at or below -20°C.

**Companion Products:**

- Phospho-PKCα/β II (Thr638/641) Antibody #9375
- Phospho-PKC (pan) (βII Ser660) Antibody #9371
- Phospho-PKC (pan) (γ Thr514) Antibody #9379
- Phospho-PEA-15 (Ser104) Antibody #2776
- PEA-15 Antibody #2780
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-biotin, HRP-linked Antibody #7075
- Biotinylated Protein Ladder #7727
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- 20X LumiGLO® Reagent and 20X Peroxide #7003
- Cell Lysis Buffer (10X) #9803
- Blue Loading Buffer Pack #7722
- TPA (Phorbol-12-Myristate-13-Acetate) #9905



Western blot analysis of extracts from A172 cells, untreated or treated with indicated concentrations of Bisindolylmaleimide I for 30 minutes, followed by stimulation with 200 nM TPA for 10 minutes. The phosphorylation of PEA-15 was detected by using Phospho-PEA-15 (Ser104) Antibody #2776 (upper). PEA-15 Antibody #2780 was used as a loading control (lower). Bisindolylmaleimide I-mediated inhibition of TPA-induced PKC phosphorylation of PEA-15 at Ser104 is shown.

**IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry IC—Immunocytochemistry IF—Immunofluorescence  
 F—Flow cytometry E—ELISA D—DELFI<sup>®</sup>  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken X—Xenopus  
 Z—zebra fish B—bovine All—all species expected  
 Species enclosed in parentheses are predicted to react based on 100% sequence homology.

# Material Safety Data Sheet (MSDS) for Bisindolylmaleimide I, Hydrochloride

## I. Identification:

**Product name:** Bisindolylmaleimide I, Hydrochloride  
**Product Catalog:** 9841  
**CAS number:** Not applicable to mixtures  
**Manufacturer Supplier:** Cell Signaling Technology  
 3 Trask Lane  
 Danvers, MA 01923 USA  
 978-867-2300 TEL  
 978-867-2400 FAX  
 978-578-6737 EMERGENCY TEL

## II. Composition/Information:

**Substance Name:** Bisindolylmaleimide I, Hydrochloride  
**Synonyms:** GF 109203X, 3-[1-(Dimethylaminopropyl)indol-3-yl]-4-(indol-3-yl)maleimide hydrochloride  
**CAS#:** 176504-36-2  
**Molecular Weight:** 448.95  
**Molecular Formula:** C<sub>25</sub>H<sub>24</sub>N<sub>4</sub>O<sub>2</sub> • HCl

## III. Hazard Identification:

To the best of our knowledge, the chemical, physical, and toxicological properties of this solution have not been thoroughly investigated.

**EMERGENCY OVERVIEW:** May be an irritant. May cause irritation to eyes, skin, mucous membranes.

**HMIS rating:** Health 1  
 Flammability 0  
 Reactivity 0

## IV. First Aid Measures:

**Inhalation:** If inhaled, remove to fresh air. If breathing is difficult, get medical attention.  
**Ingestion:** If swallowed, wash out mouth with water provided person is conscious. Get medical attention.  
**Skin exposure:** In case of contact, immediately wash skin with soap and water for at least 15 minutes. Remove contaminated clothing. Wash clothing before reuse.  
**Eye exposure:** In case of contact with eyes, immediately flush eyes water for at least 15 minutes. Get medical attention.

## V. Fire Fighting Measures:

**Flash Point:** Data not available.  
**Autoignition Temperature:** Data not available.  
**Fire extinguishing media:** Water spray, dry chemical, foam, or carbon dioxide.  
**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

**VI. Accidental Release Measures:** Take appropriate precautions to minimize direct contact with skin, eyes, mucous membranes, and prevent inhalation of dust. Isolate the spill area. Wear approved self-contained breathing apparatus, protective clothing and chemical resistant gloves. Sweep up carefully to avoid raising dust and transfer to a chemical waste container for disposal according to local, state, and federal regulations. Ventilate area and wash spill site after material pickup is complete. Do not let substance enter drains.

## VII. Handling And Storage:

**Storage:** Store in tightly closed container at -20°C.

Avoid contact with skin, eyes, mucous membranes and respiratory system. Wash hands thoroughly after handling.

**VIII. Exposure Controls/Personal:** Occupational exposure limits not found.

**Ventilation System:** A system of local and/or general exhaust is recommended.  
**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.  
**Eye protection:** Wear protective safety glasses. Maintain eye wash fountain and quick-drench facilities in work area.

## IX. Physical And Chemical Properties

**Appearance:** crystalline solid  
**Color:** reddish-orange  
**Odor:** none  
**Boiling Point:** data not available  
**Melting Point:** data not available  
**Ignition temperature:** data not available  
**Volatile Organic Compounds:** data not available  
**pH:** data not available  
**Solubility:** slightly miscible in water, soluble in DMSO

## X. Stability and Reactivity:

**Stability:** Stable under recommended storage conditions.  
**Conditions to avoid:** Moisture. Protect from light and heat.  
**Materials to avoid:** Avoid acids and bases.  
**Hazardous Decomposition:** Carbon oxides, sulfur oxides.  
**Hazardous exothermic reactions:** During fire conditions if may produce toxic gases such as carbon monoxide, carbon dioxide.

**XI. Toxicological Information:** To the best of our knowledge, the chemical, physical, and toxicological properties of this solution have not been thoroughly investigated.

**Acute Effects:** Data not available.  
**Primary Effects:** Data not available. May be an irritant to eyes, skin, respiratory system.  
**Chronic Effects:** Data not available.

**XII. Ecological Information:** Data not available for this product.

**XIII. Disposal Considerations:** Dispose of in accordance with federal, state, local environmental regulations.

## XIV. Transport Information:

**DOT : Proper Shipping Name:** None.  
 This substance is considered non-hazardous for transport.

**IATA : Proper Shipping Name:** None.  
 This substance is considered non-hazardous for air transport.

## XV. Regulatory Information:

**EU Regulations/Classifications/Labeling Information:** Not available for this product.  
**US Regulatory Information:**  
 Not SARA listed.

## XVI. Other Information:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.