

## Bafilomycin A1

ATPase Inhibitor

**Catalog # V115-905**

Lot # N3365-4

CAS# 88899-55-2

### Product Description

Molecular Formula: C<sub>35</sub>H<sub>58</sub>O<sub>9</sub>

Appearance: Lyophilized white powder

Molecular Weight: 622.8

Purity: >98% (HPLC); NMR (conforms)

Solubility: May be dissolved in DMSO (50 mg/ml)

### Alternative name(s)

(-)-Bafilomycin A1

### Storage and Stability

Store desiccated as supplied at -20°C for up to 2 years.

Store solutions at -20°C for up to 3 months.

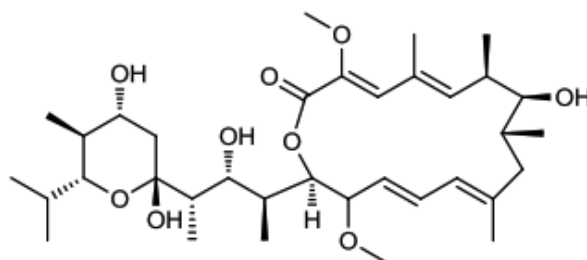
### Scientific Background

A vacuolar H<sup>+</sup>-ATPase inhibitor, IC<sub>50</sub> = 0.6-1.5 nM in bovine chromaffin granules (1). Highly selective for V-ATPase over F-ATPases and P-ATPase. Inhibits autophagy by preventing maturation of autophagic vacuoles via inhibition of fusion between autophagosomes and lysosomes (2). Inhibits bone resorption in various models (3). An extremely useful tool for exploring physiological processes regulated by V-ATPase (4).

### References

1. S Gagliardi et al. *Curr. Med. Chem.* 1999 6:1197
2. A Yamamoto et al. *Cell Struct. Funct.* 1998 23:33
3. AV Neutzky-Wulff et al. *BMC Musculoskelet. Disord.* 2010 11:109
4. T Yoshimori et al. *J. Biol. Chem.* 2015 290:8039

### Molecular Structure



## Bafilomycin A1

ATPase Inhibitor

Catalog #	V115-905
CAS #	88899-55-2
Lot #	N3365-4
Purity	>98% (HPLC); NMR (Conforms)
Format	Lyophilized powder
Solubility	May be dissolved in DMSO (50 mg/ml)
Storage & Shipping	Store desiccated as supplied at -20°C for up to 2 years. Store solutions at -20°C for up to 3 months. Shipped at ambient temperature.

To place your order, please contact us by phone 1-(604)-232-4600, fax 1-604-232-4601 or by email: [orders@signalchem.com](mailto:orders@signalchem.com) or [IVD@signalchem.com](mailto:IVD@signalchem.com) - [www.signalchem.com](http://www.signalchem.com)

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# SAFETY DATA SHEET

## Article 1 - Product Identification

**Product Name: Bafilomycin A1**

**Catalog # V115-905**

*This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.*

Manufacturer's Name: SignalChem Biotech Inc.  
 Street Address: 110-13120 Vanier Place  
 City, Prov. Postal Code: Richmond, BC, V6V 2J2  
 Fax: 604-232-4601  
 EMERGENCY PHONE: 604-232-4600

## Article 2 - Hazardous Identification

### 2.1 Classification of Substance (GHS)

Acute Toxicity: Oral, Category 4  
 Skin Corrosion/Irritation, Category 2  
 Serious Eye Damage/Eye Irritation, Category 1  
 Toxic to Reproduction, Category 2  
 Specific target organ toxicity – (repeated exposure) Category 2

### 2.2 Label Elements

Classification according to Regulation (EC) No 1272/2008



**GHS Signal Word: DANGER**

#### GHS Hazard Phrases:

H302	Harmful if swallowed
H315	Causes skin irritation.
H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure.

#### GHS Precaution Phrases:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P270	Do not eat, drink or smoke when using this product

#### GHS Response Phrases:

P301+312+330	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse Mouth
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313	IF exposed or concerned: Get medical attention/advice.
P332+313	If skin irritation occurs, get medical advice/attention.
P362+364	Take off contaminated clothing and wash it before reuse.

#### GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal Information

**2.3 Other hazards:** To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

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# SAFETY DATA SHEET

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## Article 3 – Composition/Information on Ingredients

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### 3.1 Substance

**Product Name(s):** Bafilomycin A1  
**Chemical Name:** Bafilomycin A1  
**Molecular Formula:** C<sub>35</sub>H<sub>58</sub>O<sub>9</sub>  
**CAS Number:** 88899-55-2  
**Concentration:** 100%

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## Article 4 – First Aid

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### 4.1 Description of First Aid Measures

**General:** Move out of dangerous area and contact a doctor. Provide them with this data sheet.

**If Inhaled:** Move to fresh air, and monitor breathing. Give artificial respiration if breathing stops. Get immediate medical attention.

**In Case of Skin Contact:** Remove contaminated clothing. Immediately wash with soap and water for an extended period of time. Consult a doctor if symptoms occur. Wash clothing before reuse.

**In Case of Eye Contact:** Hold eyelids apart and immediately flush eye(s) with copious amounts of water for at least 15 minutes. Have eyes examined and tested by medical personnel.

**If Swallowed:** Rinse out the mouth with water provided person is conscious. Do not give anything by mouth. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

**4.2 Important Symptoms and Effects:** Lung, skin and eye irritant. Prolonged exposure is not known to aggravate prior medical conditions

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## Article 5 – Fire Fighting Measures

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### 5.1 Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special Hazards

May emit toxic fumes.

### 5.3 Precautions for Fire Fighters

Wear suitable protection to prevent contact and respirator for fumes, and full protective gear to prevent contact with skin and eyes.

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## Article 6 – Accidental Release Measures

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### 6.1 Personal Precautions

Relocate personnel to a safe area and ensure ventilation is in working order. Wear protective equipment. Avoid dust formation and inhalation of fumes. As conditions warrant, wear an approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

### 6.2 Environmental Precautions

Do not let product enter drains, if safe to do so.

### 6.3 Methods for Containment and Clean-up

Contain spill and collect, as appropriate. Sweep up material without generating dust clouds and place in a sealed container for disposal. Clean surface where spill occurred.

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## Article 7 – Handling and Storage

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### 7.1 Handling Precautions

Use in a well-ventilated area. Avoid formation of dust or aerosols. Keep away from sources of ignition. Wear suitable protective clothing. Avoid inhalation, and skin or eye contact.

### 7.2 Safe Storage Measures

Keep product in a sealed contained located in dry well-ventilated area. Store in accordance with information listed on the product insert.

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# SAFETY DATA SHEET

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## Article 8 – Exposure Controls/Personal Protection

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### 8.1 Control Parameters

Contains no substances with occupational exposure limit values.

### 8.2 Specific Engineering Controls

Keep airborne levels low by using a fumehood or local exhaust.

### 8.3 Personal Protection

**Eye/Face Protection:** Use safety glasses.

**Skin Protection:** Use chemical resistant gloves. Remove and dispose of gloves properly after use. Wash hands thoroughly after use.

**Body Protection:** Wear a lab coat.

**Respiratory Protection:** If risk is present wear a dust respirator.

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## Article 9 – Physical and Chemical Properties

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**Appearance:** White powder

**Odour:** data not available

**Odour Threshold:** data not available

**pH:** data not available

**Melting/Freezing Pt:** data not available

**Boiling Pt:** data not available

**Flash Pt:** data not available

**Explosive Properties:** data not available

**Solubility notes:** Soluble in DMSO (50 mg/ml)

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## Article 10 – Stability and Reactivity

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**10.1 Stability:** Stable under recommended transport or storage conditions

**10.2 Conditions to Avoid:** Moist and hot conditions

**10.3 Incompatibility – Materials to Avoid:** Strong oxidizing agents

**10.4 Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>). Possible toxic fumes upon combustion.

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## Article 11 – Toxicological Information

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**11.1 Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

**Acute Toxicity:** Oral TDLO (mouse): 50 mg/kg

**Chronic Toxicity:** Investigated as a drug.

For complete information, see Registry of Toxic Effects of Chemical Substances (RTECS) entry. Ruxolitinib RTECS Number: UQ8002700

**Skin Corrosion/Irritation:** data not available

**Eye Damage/Irritation:** data not available

**Respiratory or Skin Sensitization:** data not available

**Germ Cell Mutagenicity:** data not available

**Carcinogenicity:** None according to NIOSH

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## Article 12 – Ecological Information

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### 12.1 Toxicity

Avoid release into the environment.

### 12.2 Degradability

Data not available

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## Article 13 – Disposal Considerations

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### 13.1 Waste Treatment

Product and Contaminated Packaging: Dispose according to national legislation. Contact a licensed chemical disposal company.

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# SAFETY DATA SHEET

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## Article 14 – Transport Information

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**14.1 DOT**

Not dangerous goods

**14.2 IMDG**

Not dangerous goods

**14.2 IATA**

Not dangerous goods

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## Article 15 – Regulatory Information

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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

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## Article 16 – Other Information

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The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.

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