

PD-325901

MEK Inhibitor

Catalog # M02-901B

Lot # O3936-10

CAS # 391210-10-9

Product Description

Molecular Formula: C₁₆H₁₄F₃N₂O₄

Appearance: White powder

Molecular Weight: 482.2

Purity: ≥98% (HPLC); NMR (Conforms)

Solubility: May be dissolved in DMSO (12 mg/ml)

Alias

N-[(2R)-2,3-Dihydroxypropoxy]-3,4-difluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide

Specific Activity

MEK Inhibitor

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.

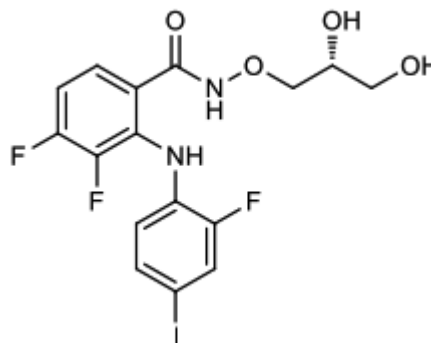
Scientific Background

A selective non-ATP competitive MEK inhibitor (IC₅₀ = 0.33 nM) (1). Inhibits growth and/or proliferation of a variety of cancer cells (2). Enhances self-renewal of embryonic stem cells (3). In combination with vitamin C, synergistically induces hypomethylation of mouse embryonic stem cells (4). In combination with CHIR-99021 and A83-01 induces generation of ground state iPS cells from human and rat somatic cells (5).

References

1. SD Barrett et al. Bioorg. Med. Chem. Lett. 2008 18:6501.
2. L Ciuffreda et al. Neoplasia 2009 11:720.
3. Z Ai et al. Stem Cells Int. 2016 2016:1792573.
4. C Li et al. Oncotarget 2016 7:39730.
5. W Li et al. Cell Stem Cell 2009 4:16.

Molecular Structure



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SAFETY DATA SHEET

Article 1 – Identification of the Substance

Product Name: PD-325901

Catalog # M02-901B

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 3)

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:

H301	Toxic if swallowed.
H313	May be harmful if in contact with the skin.
H333	May be harmful if inhaled.
H335	May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.

GHS Precaution Phrases:

P261	Avoid breathing dust/fume/gas/mist/vapour/spray.
P264	Wash face, hands and any exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke while using this product.
P280	Wear protective gloves/eye protection/face protection.
P301+310+P330	If swallowed, immediately call a poison center/physician. Rinse mouth.
P314	Get medical advice/attention if you feel unwell.

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.

Article 3 – Composition/Information on Ingredients

3.1 Substance

Product Name(s): PD-325901
Chemical Name: N-[(2R)-2,3-Dihydroxypropoxy]-3,4-difluoro-2-[(2-fluoro-4-iodophenyl)amino]-benzamide
Molecular Formula: C₁₆H₁₄F₃I₂N₂O₄
CAS Number: 391210-10-9
Concentration: 100%

Article 4 – First Aid

4.1 Description of First Aid Measures

General: Consult a physician. Show this safety data sheet to the doctor.

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If Inhaled: Remove from exposure. Move to fresh air. If breathing is difficult, administer oxygen. If breathing stops, administer artificial respiration.

In Case of Skin Contact: Wash with soap and water for 15 minutes. Remove contaminated clothing and shoes.

In Case of Eye Contact: Immediately flush with water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes separating eyelids.

If Swallowed: Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects: The most important known symptoms and effects are described in section 2.2

Article 5 – Fire Fighting Measures

5.1 Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances.

5.2 Special Hazards

Combustion products are carbon monoxide, carbon dioxide.

5.3 Precautions for Fire Fighters

Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Article 6 – Accidental Release Measures

6.1 Personal Precautions

Use personal protective equipment. Avoid contact with skin, eyes, and clothing. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before reuse.

6.2 Environmental Precautions

Prevent material from entering drains or water courses.

6.3 Methods for Containment and Clean-up

Prevent further leakage or spillage if safe to do so. Cover powder with wet paper towels. Minimize spreading. Pick up and transfer to properly labeled containers for disposal.

Article 7 – Handling and Storage

7.1 Handling Precautions

Wear personal protective equipment. Avoid contact with skin, eyes, and clothing. Use only in an area approved for laboratory research.

7.2 Safe Storage Measures

This product is stable if stored under recommended conditions. It should be kept in a tightly closed container. This product should be handled only by qualified experienced professionals. Wash thoroughly after handling this material.

Article 8 – Exposure Controls/Personal Protection

8.1 Control Parameters

This product does not contain any hazardous materials with occupational exposure limits established by region-specific regulatory bodies.

8.2 Specific Engineering Controls

Showers, eyewash stations, ventilation systems

8.3 Personal Protection

Eye/Face Protection: Tightly fitting safety goggles. Face shield.

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: Wear NIOSH / MSHA-approved respirator if required.

Personal Hygiene Measures: When using this product, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

Article 9 – Physical and Chemical Properties

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: may be dissolved in DMSO (12 mg/ml)

Article 10 – Stability and Reactivity

10.1 Stability: Stable under recommended transport or storage conditions

10.2 Conditions to Avoid: No data available

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10.3 Incompatibility – Materials to Avoid: No data available

10.4 Hazardous Decomposition Products: Carbon monoxide (CO); carbon dioxide (CO₂)

Article 11– Toxicological Information

11.1 Toxicological Effects: The toxicological effects of this product have not been thoroughly studied. Oral Rat (TDLo): 1-100 mg/kg

Article 12 – Ecological Information

12.1 Toxicity

Avoid release into the environment.

12.2 Degradability

Data not available

Article 13 – Disposal Considerations

13.1 Waste Treatment

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

Article 14 – Transport Information

14.1 DOT

Not dangerous goods

14.2 IMDG

Not dangerous goods

14.2 IATA

Not dangerous goods

Article 15 – Regulatory Information

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.

Article 16 – Other Information

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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