

Sorafenib

Kinase Inhibitor

Catalog # R01-900

Lot # Y4172-2

CAS # 284461-73-0

Product Description

Molecular Formula: C₂₁H₁₆ClF₃N₄O₃

Appearance: Off-white powder

Melting Point: 204-206°C

Molecular Weight: 464.8

Purity: >99% (TLC); NMR (Conforms)

Solubilization: Soluble in DMSO (200 mg/ml); or Ethanol (3 mg/ml)

Aliases

1. 4-(4-(3-(4-chloro-3 (trifluoromethyl) phenyl) ureido) phenoxy)-N-methylpicolinamide
2. BAY 43-9006

Specific Activity

Raf-1 kinase inhibitor (and others).

Storage and Stability

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

Store solutions at -20°C for up to 1 month.

Scientific Background

Initially developed as a Raf kinase inhibitor, IC₅₀ = 6 nM, but has been shown to inhibit many receptor tyrosine kinases including BRAF (IC₅₀ = 22 nM); VEGFR-2 (IC₅₀ = 90 nM); VEGFR-3 (IC₅₀ = 20 nM); PDGFR-β (IC₅₀ = 57 nM); Flt3 (IC₅₀ = 58 nM); c-KIT (IC₅₀ = 68 nM); FGFR-1 (IC₅₀ = 580 nM) (1). Paradoxically more potent in a cellular assay (IC₅₀ = 20 nM) compared to an isolated enzyme assay (IC₅₀ = 107 nM) for c-Fms (2). Inhibits activation of MAPK pathway and ERK phosphorylation (3). Induces caspase-independent apoptosis in melanoma cells (4). Clinically useful anticancer agent.

References

1. SM Wilhelm *et al.* *Cancer Res.* 2004 64:7099
2. J Guo *et al.* *Mol. Cancer Ther.* 2006 5:1007
3. SM Wilhelm *et al.* *Proc. Am. Assoc. Cancer Res.* 2003 44:106609
4. DJ Panka *et al.* *Cancer Res.* 2006 66:1611

Catalog #

Aliquot Size

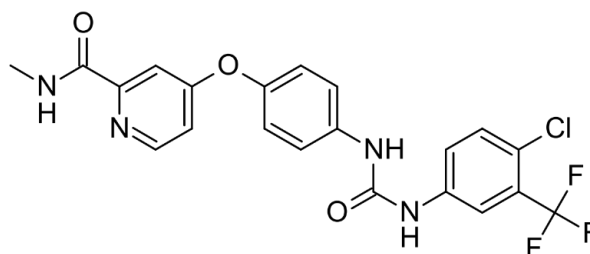
R01-900-10

10 mg

R01-900-50

50 mg

Molecular Structure



Sorafenib

Kinase Inhibitor

Catalog #

R01-900

CAS #

284461-73-0

Lot #

Y4172-2

Purity

>99% (TLC); NMR (Conforms)

Format

Lyophilized powder

Solubilization

Soluble in DMSO (200 mg/ml); or Ethanol (3 mg/ml)

Storage & Shipping

Store desiccated as supplied at -20° for up to 2 years. Store solutions at -20°C for up to 1 month.

To place your order, please contact us by phone 1-866-9KINASE (54-6273), 1-(604)-232-4600, fax 1-604-232-4601 or by email: orders@signalchem.com - www.signalchem.com

FOR IN VITRO RESEARCH PURPOSES ONLY. NOT INTENDED FOR USE IN HUMAN OR ANIMALS.

SAFETY DATA SHEET

Article 1 – Identification of the Substance

Product Name: Sorafenib

Catalog # R01-900

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)

Toxic to Reproduction, Category 1B

Toxic to Aquatic Life, Category 1

2.2 Label Elements

Classification according to Regulation (EC) No 1272/2008



GHS Signal Word: DANGER

GHS Hazard Phrases:

H360-H362	May damage fertility or the unborn child. May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

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.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:

P308+313	IF exposed or concerned: Get medical attention/advice.
P314	Get medical advice/attention if you feel unwell.
P391	Collect spillage.

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): Sorafenib
Chemical Name: 4-(4-(3-(4-chloro-3 (trifluoromethyl) phenyl) ureido) phenoxy)-N-methylpicolinamide
Molecular Formula: C₂₁H₁₆ClF₃N₄O₃

To place your order, please contact us by phone 1-866-9KINASE (54-6273), 1-(604)-232-4600, fax 1-604-232-4601 or by email: orders@signalchem.com - www.signalchem.com

FOR IN VITRO RESEARCH PURPOSES ONLY. NOT INTENDED FOR USE IN HUMAN OR ANIMALS.

CAS Number: 284461-73-0
Concentration: 100%

Article 4 – First Aid

4.1 Description of First Aid Measures

General: Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.

If Inhaled: Supply fresh air; consult doctor in case of complaints.

In Case of Skin Contact: Generally, the product does not irritate the skin.

In Case of Eye Contact: Rinse opened eye for several minutes under running water.

If Swallowed: If symptoms persist, consult a doctor.

4.2 Important Symptoms and Effects: May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive side effects, teratogenic effects. No further relevant information available.

Article 5 – Fire Fighting Measures

5.1 Extinguishing Media

Use fire fighting measures that suit the environment. A solid water stream may be inefficient.

5.2 Special Hazards

No relevant information available.

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.

Article 6 – Accidental Release Measures

6.1 Personal Precautions

Not required.

6.2 Environmental Precautions

Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/surface or ground water.

6.3 Methods for Containment and Clean-up

Dispose contaminated material as waste according to article 13.

See Section 7 for information on safe handling.

See Section 8 for information on personal protective equipment.

See Section 13 for disposal information.

Article 7 – Handling and Storage

7.1 Handling Precautions

No special precautions are necessary if used correctly. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure. Keep away from sources of ignition. Take precautionary measures against static discharge.

7.2 Safe Storage Measures

No special measures required.

Article 8 – Exposure Controls/Personal Protection

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

General protective and hygienic measures: Keep away from foodstuffs, beverages, and feed. Wash hands before breaks and at the end of work. Store protective clothing separately.

Respiratory Protection: In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.

Protection of Hands: The glove material has to be impermeable and resistant to the product/the substance/ the preparation.

Eye protection: Tightly sealed goggles.

Article 9 – Physical and Chemical Properties

Appearance: Off-white powder

Odour: data not available

Odour Threshold: data not available

To place your order, please contact us by phone 1-866-9KINASE (54-6273), 1-(604)-232-4600,
fax 1-604-232-4601 or by email: orders@signalchem.com - www.signalchem.com

FOR IN VITRO RESEARCH PURPOSES ONLY. NOT INTENDED FOR USE IN HUMAN OR ANIMALS.

pH: data not available

Melting/Freezing Pt: 204-206°C

Boiling Pt: data not available

Flash Pt: data not available

Explosive Properties: data not available

Solubility notes: soluble in DMSO (200 mg/mL); or ethanol (3 mg/mL)

Article 10 – Stability and Reactivity

10.1 Stability: No further relevant information available.

10.2 Conditions to Avoid: No decomposition if used according to specifications. No further relevant information available.

10.3 Incompatibility – Materials to Avoid: Strong oxidizing agents.

10.4 Hazardous Decomposition Products: Carbon oxides (CO, CO₂), hydrogen chloride, hydrogen fluoride, nitrogen oxides.

Article 11– Toxicological Information

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

Acute Toxicity: Oral TDLO (human, intermittent): 2.84 mg/kg//21D

Skin Corrosion/Irritation: No irritant effect.

Eye Damage/Irritation: No irritant effect.

Respiratory or Skin Sensitization: data not available

Germ Cell Mutagenicity: data not available

Carcinogenicity: None according to NIOSH

Article 12 – Ecological Information

12.1 Toxicity

Water hazard class 3 (self-assessment): extremely hazardous for water. Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies.

12.2 Degradability

Data not available

Article 13 – Disposal Considerations

13.1 Waste Treatment

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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.

To place your order, please contact us by phone 1-866-9KINASE (54-6273), 1-(604)-232-4600,
fax 1-604-232-4601 or by email: orders@signalchem.com - www.signalchem.com

FOR IN VITRO RESEARCH PURPOSES ONLY. NOT INTENDED FOR USE IN HUMAN OR ANIMALS.