



## MATERIAL SAFETY DATA SHEET (MSDS)

Version 3.10

Revision Date 6/15/2017

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### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name: Razaxaban HCl  
Product Catalogue Number: 328086  
Brand: MedKoo  
CAS-No: 405940-76-3

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Laboratory chemicals, Synthesis of substances.

#### 1.3 Details of the supplier of the safety data sheet

Company: MedKoo Biosciences, Inc.  
2500 Gateway Centre Blvd. Suite 400, Morrisville, NC27560, USA  
Telephone: 919-636-5577  
Fax: 919-980-4831

#### 1.4 Emergency telephone number

Emergency Phone # 911 (in USA) or local emergency phone#

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Respiratory sensitisation (Category 1), H334

Skin sensitisation (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Reproductive toxicity (Category 2), H361

Specific target organ toxicity - single exposure (Category 1), H370

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Chronic aquatic toxicity (Category 4), H413

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture

Pictogram:



Signal word: Danger

Hazard statement(s)

H315: Causes skin irritation.

H317: May cause an allergic skin reaction

H318: Causes serious eye damage.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335: May cause respiratory irritation.

H341: Suspected of causing genetic defects.

H361: Suspected of damaging fertility or the unborn child.

H370: Causes damage to organs.  
H413: May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

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 skin thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/ eye protection/ face protection.  
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310: Immediately call a POISON CENTER/doctor.  
P321: Specific treatment (see supplemental first aid instructions on this label).  
P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.  
P362: Take off contaminated clothing and wash before reuse.  
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.  
P405: Store locked up.  
P501: Dispose of contents/ container to an approved waste disposal plant.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Synonyms: Razaxaban hydrochloride; BMS-561389; BMS-561389-01; DPC-906; BMS-561389-06; BMS561389; BMS561389-01; DPC906; BMS561389-06  
Formula:  $C_{24}H_{21}ClF_4N_8O_2$   
Molecular weight: 564.92  
CAS-No: 405940-76-3

**Hazardous components**

| Component        | Classification   | Concentration |
|------------------|--|---------------|
| Razaxaban<br>HCl | Skin Irrit. 2; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Repr. 2; STOT SE 3; Aquatic Chronic 4; H315, H317, H318, H334, H335, H341, H361, H413 | <= 100 %      |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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### **5. FIREFIGHTING MEASURES**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

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

#### **5.2 Special hazards arising from the substance or mixture**

Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Hydrogen fluoride

#### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information**

No data available

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### **6. ACCIDENTAL RELEASE MEASURES**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

#### **6.2 Environmental precautions**

No special environmental precautions required. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

#### **6.4 Reference to other sections**

For disposal see section 13.

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### **7. HANDLING AND STORAGE**

#### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes.

Further processing of solid materials may result in the formation of combu formation should be taken into consideration before additional processing

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

#### **7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C for short term (weeks to 3 months) or -20°C for long term (3 months to years).

Light sensitive.

Keep in a dry place.

#### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### Components with workplace control parameters

| Component        | CAS-No.     | Value | Control parameters | Basis |
|------------------|-------------|-------|--------------------|-------|
| Razaxaban<br>HCl | 405940-76-3 | N/A   | N/A                | N/A   |

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

##### Data source

KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

##### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Respiratory protection is not required. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

No special environmental precautions required.

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on basic physical and chemical properties

|   |   |
|---|---|
| a) Appearance Form:                             | Color: white to beige<br>Form: Solid powder |
| b) Odour  | No data available                           |
| c) Odour Threshold                              | No data available                           |
| d) pH   | No data available                           |
| e) Melting point/freezing point                 | No data available                           |
| f) Initial boiling point and boiling range      | No data available                           |
| g) Flash point                                  | No data available                           |
| h) Evaporation rate                             | No data available                           |
| i) Flammability (solid, gas)                    | No data available                           |
| j) Upper/lower flammability or explosive limits | No data available                           |
| k) Vapour pressure                              | No data available                           |
| l) Vapour density                               | No data available                           |
| m) Relative density                             | No data available                           |
| n) Water solubility                             | Insoluble                                   |
| o) Partition coefficient: noctanol/ water       | log Pow: > 99                               |
| p) Auto-ignition temperature                    | No data available                           |
| q) Decomposition temperature                    | No data available                           |
| r) Viscosity                                    | No data available                           |
| s) Explosive properties                         | No data available                           |
| t) Oxidizing properties                         | No data available                           |

## 9.2 Other safety information

No data available

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## 10. STABILITY AND REACTIVITY

**10.1 Reactivity :** No data available

**10.2 Chemical stability:** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions:** No data available

**10.4 Conditions to avoid:** No data available

**10.5 Incompatible materials:** Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)  
Other decomposition products - No data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|                       |                                   |
|-----------------------|-----------------------------------|
| <b>Acute toxicity</b> | No data available                 |
| Inhalation:           | No data available                 |
| Inhalation:           | Irritating to respiratory system. |
| Dermal                | No data available                 |

**Skin corrosion/irritation:** No data available

**Serious eye damage/eye irritation:** No data available

**Respiratory or skin sensitization:** No data available

**Germ cell mutagenicity:** No data available

Hamster: No data available

Lungs: No data available

Cytogenetic analysis: No data available

Mouse: No data available

Micronucleus test: No data available

### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### **Reproductive toxicity**

Reproductive toxicity - Rat - No data available

Maternal Effects: No data available

Reproductive toxicity - Rat - No data available

Effects on Newborn: No data available

Developmental Toxicity - Rat - No data available

Specific Developmental Abnormalities: No data available

**Specific target organ toxicity - single exposure** No data available, Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure:** No data available

**Aspiration hazard:** No data available

### **Additional Information**

RTECS: Not available

Alopecia., Liver injury may occur., Kidney injury may occur., Nausea, Headache, Vomiting, bone marrow depression

Stomach - Irregularities - No data available

Central nervous system - No data available

Kidney - Irregularities - No data available

Heart - Irregularities - No data available

Stomach - Irregularities - No data available

Stomach - Irregularities - No data available

Kidney - Irregularities - No data available

Stomach - Irregularities - No data available

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## **12. ECOLOGICAL INFORMATION**

**12.1 Toxicity:** No data available

**12.2 Persistence and degradability:** No data available

**12.3 Bioaccumulative potential:** No data available

**12.4 Mobility in soil:** No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects:** No data available

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

**DOT (US):** Not dangerous goods

**IMDG:** Not dangerous goods

**IATA:** Not dangerous goods

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## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

No SARA Hazards, Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

| Components | CAS-No.     | Revision data |
|------------|-------------|---------------|
| Ranaxaban  | 405940-76-3 | N/A           |
| HCl        |             |               |

### Pennsylvania Right To Know Components

| Components | CAS-No.     | Revision data |
|------------|-------------|---------------|
| Ranaxaban  | 405940-76-3 | N/A           |
| HCl        |             |               |

### New Jersey Right To Know Components

| Components | CAS-No.     | Revision data |
|------------|-------------|---------------|
| Ranaxaban  | 405940-76-3 | N/A           |
| HCl        |             |               |

### California Prop. 65 Components

| Components | CAS-No.     | Revision data |
|------------|-------------|---------------|
| Ranaxaban  | 405940-76-3 | N/A           |
| HCl        |             |               |

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

|                 |                          |
|-----------------|--------------------------|
| Acute Tox.      | Acute toxicity           |
| Aquatic Chronic | Chronic aquatic toxicity |

|                    |  |
|--------------------|--|
| Eye Dam.           | Serious eye damage   |
| Eye Irrit.         | Eye irritation   |
| Flam. Liq.         | Flammable liquids  |
| H225               | Highly flammable liquid and vapour.  |
| H301 + H311 + H331 | Toxic if swallowed, in contact with skin or if inhaled                     |
| H315               | Causes skin irritation.  |
| H317               | May cause an allergic skin reaction.                                       |
| H318               | Causes serious eye damage.   |
| H319               | Causes serious eye irritation.   |
| H334               | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335               | May cause respiratory irritation.  |
| H336               | May cause drowsiness or dizziness.   |
| H341               | Suspected of causing genetic defects.                                      |
| H361               | Suspected of damaging fertility or the unborn child.                       |
| H370               | Causes damage to organs.   |
| H413               | May cause long lasting harmful effects to aquatic life.                    |
| Muta.              | Germ cell mutagenicity   |
| Repr.              | Reproductive toxicity  |
| Resp. Sens.        | Respiratory sensitisation  |
| Skin Irrit.        | Skin irritation  |
| Skin Sens.         | Skin sensitisation   |
| STOT SE            | Specific target organ toxicity - single exposure                           |

#### HMIS Rating

Health hazard: 0  
Chronic Health Hazard:  
Flammability: 0  
Physical Hazard 0

#### NFPA Rating

Health hazard: 0  
Fire Hazard: 0  
Reactivity Hazard: 0

#### Further information

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#### Preparation Information

MedKoo Biosciences, Inc.  
Product Safety – multiple Region  
Tel: 919-636-5577

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