



Catalog # Aliquot Size

A05-58

1 mg

## AKT (PKB) Substrate

Synthetic peptide substrate derived from GSK3

Catalog # A05-58

Lot # A4619-6

### Product Description

The AKT (PKB) Substrate peptide sequence (CKRPRA-ASFAE) is based on the N-terminus of GSK3.

### Molecular Weight

The theoretical molecular weight is 1235.41.

### Purity

The purity was determined to be 95.50 % by HPLC analysis.

### Formulation

1mg of peptide supplied as a lyophilized powder.

### Storage and Stability

Store product at -20°C. For optimal storage, aliquot diluted product into smaller quantities and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

### Reconstitution Protocol

Dilute peptide in 20mM Tris-HCl, pH 7.5 solution to a final concentration of 1mg/ml.

### Related Kinases

AKT (PKB) Substrate can be utilized as a substrate for the following active protein kinases.

| Product Name | Catalog Number |
|--------------|----------------|
| AKT1, Active | A16-10G        |
| AKT2, Active | A17-10G        |
| AKT3, Active | A18-10G        |
| SGK1, Active | S06-11G        |
| SGK2, Active | S07-10G        |
| SGK3, Active | S08-10G        |
| PAK4, Active | P05-10G        |
| PAK7, Active | P07-10G        |

## AKT (PKB) Substrate

Synthetic peptide substrate derived from GSK3

|                    |   |
|--------------------|---|
| Catalog #          | A05-58  |
| Quantity           | 1 mg  |
| Lot #              | A4619-6   |
| Purity             | 95.50%  |
| Format             | 1 mg lyophilized powder   |
| Stability          | 1yr at -20°C from date of shipment  |
| Storage & Shipping | Store product at -20°C. For optimal storage, aliquot diluted product into smaller quantities and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles. Product shipped at ambient temperature. |

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](mailto:orders@signalchem.com) - [www.signalchem.com](http://www.signalchem.com)

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# SAFETY DATA SHEET

## Article 1 - Product Identification

**Product Name: AKT (PKB) Substrate**

**Catalog # A05-58**

*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 - Hazards Identification

Emergency Overview: The product contains no substances which at their given concentration, are considered to be hazardous to health.

WHMIS Classification: Not WHMIS controlled

GHS Classification: Not a dangerous substance according to GHS.

Potential health effects:

Inhalation: H333 – May be harmful if swallowed  
Skin: H313 – May be harmful in contact with skin  
Eyes: May cause eye irritation  
Ingestion: H303 – May be harmful if swallowed

Precautionary Statements:

Inhalation: P304+P312 – If inhaled, remove to fresh air. Consult a physician if necessary.  
Skin: P302+P312 – If on skin, wash with soap and plenty of water. Consult a physician if necessary  
Eyes: Wash with plenty of water as a precaution.  
Ingestion: P301+P312 – Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician if necessary.

## Article 3 - Composition/Information on Ingredients

| Common Name | Chemical Name/Formula | CAS-No. | Concentration |
|-------------|-----------------------|---------|---------------|
| Peptide     | -                     | NA      | ≤100%         |

## Article 4 - First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** Breath in fresh air. If cannot breath, give artificial respiration and consult a physician.
- **After skin contact:** Immediately wash with soap and plenty of water and rinse thoroughly. Consult a physician.
- **After eye contact:** Rinse opened eyes with plenty of water for at least 15 minutes. Consult a physician.
- **After swallowing:** Rinse the mouth with plenty of water and consult a physician.

## Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, extinguishing powder, carbon dioxide, or other appropriate measure that is suitable to the environment.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

## Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Clean contaminated surface thoroughly.

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## Article 7 - Handling and Storage

- **Precautions for safe handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, contact with eyes, skin or clothing.
- **Conditions for safe storage:** Keep container tightly closed in a dry and well-ventilated place.  
Recommended storage temperature: -20 °C.

## Article 8 - Exposure Controls/Personal Protection

- **Appropriate engineering controls:**  
Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**
  - Respiratory protection:**  
Ensure adequate ventilation, especially in confined areas.
  - Skin/body protection:**  
Wear protective gloves and clothing. Use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
  - Eye/face protection:**  
Safety glasses with side-shields (or goggles) approved under appropriate government standards.
  - General hygiene considerations:**  
Handle in accordance with good industrial hygiene and safety practice.

## Article 9 – Physical and Chemical Properties

|   |  |
|---|--|
| <b>Appearance:</b> Solid.                               | <b>Danger of explosion:</b> No data available.                 |
| <b>Odour/Odour Threshold:</b> Not determined.           | <b>Explosion limits:</b> No data available.                    |
| <b>pH:</b> No data available.                           | <b>Decomposition temperature:</b> No data available.           |
| <b>Melting point/freezing point:</b> Not determined.    | <b>Vapor pressure at 20 °C:</b> No data available.             |
| <b>Boiling point/Boiling range:</b> No data available . | <b>Density:</b> No data available.                             |
| <b>Flash point:</b> No data available .                 | <b>Relative density:</b> No data available.                    |
| <b>Flammability (solid, gaseous):</b> Not determined.   | <b>Vapor density:</b> No data available.                       |
| <b>Ignition temperature:</b> No data available.         | <b>Evaporation rate:</b> No data available.                    |
| <b>Auto-igniting:</b> No data available .               | <b>Solubility in / Miscibility with Water:</b> Fully miscible. |

## Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No data available.
- **Incompatible materials:** No data available.
- **Hazardous decomposition products:** No data available.

## Article 11 - Toxicological Information

- **Acute toxicity:** Product does not present an acute toxicity hazard based on known or supplied information.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** Not available.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.
- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential health effects:**
  - Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
  - Ingestion:** May be harmful if swallowed.
  - Skin:** May be harmful if absorbed through skin. May cause skin irritation.
  - Eyes:** May cause eye irritation.
- **Signs and Symptoms of Exposure:** Not available.
- **Synergistic effects:** Not available.

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## Article 12 - Ecological Information

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- **Eco-toxicity:** Not applicable.
- **Biodegradability:** Not applicable.
- **Bio-accumulative potential:** Not applicable.
- **Mobility in soil:** Not applicable.
- **PBT and vPvB assessment:** Not applicable.
- **Other adverse effects:** Not applicable.

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## Article 13 - Disposal Considerations

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- **Disposal methods:** In accordance to applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Disposal should be made in accordance to official regulations. Use water or cleansing agents to clean the area.

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## Article 14 - Transport Information

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- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.

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## Article 15 - Regulatory Information

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Safety, health, and environmental regulations/legislation specific for the substance or mixture.

Canadian substance listings:

- **WHMIS Classification:** Non-hazardous.
- **GHS label elements:** Not applicable.
- **Signal word:** Not applicable.
- **Hazard statements:** Not applicable.

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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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