



## Mag-Bind® Blood & Saliva DNA LSP Kit

**PS6399-1-384PF**

**4 x 96 preps**

**Manual Date: December 2025**  
**Revision Number v1.1**



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# Mag-Bind<sup>®</sup> cfDNA LSP Kit

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# Intended Use/Intended User

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## Intended Use

For professional research use only.

The Mag-Bind® Blood & Saliva DNA LSP Kit is intended for use in a laboratory setting performing automated DNA extractions from up to 250 µL whole blood and 500 µL stabilized saliva on open-ended liquid handlers such as the Hamilton MicroLab STAR.

The Mag-Bind® Blood & Saliva DNA LSP Kit is magnetic bead-based and capable of processing one to four 96-well sample plates on open-ended liquid handlers such as the Hamilton MicroLab STAR.

## Intended User

The Mag-Bind® Blood & Saliva DNA LSP Kit is intended for professional use and to be used by or under the supervision of professional users, such as laboratory personnel, technicians, researchers and physicians specifically instructed and trained in molecular biology techniques and familiar with magnetic bead-based purification, either manual or automated.

# Product Description

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## Product Description

The Mag-Bind® Blood & Saliva DNA LSP Kit is designed for the efficient and reliable purification of genomic DNA (gDNA) from blood, cells, or saliva samples, with the capability to process input volumes of up to 250 µL (blood), 500 µL (saliva), and  $1 \times 10^6$  cells per sample in one to four 96-well plates with 50 to 200 µL elution volumes. This kit is automation-ready, featuring prefilled and barcoded reagent reservoirs and tubes for seamless integration with most open-ended liquid handling platforms, ensuring traceability, consistency, and high-quality results across large sample sets.

This workflow offers a fully automated solution for purifying DNA, after samples have been transferred to sample plates, reducing hands-on time while improving extraction efficiency and accuracy. The prefilled reagents eliminate the need for preparation and dispensing steps, enhancing ease of use. Barcoded reagent reservoirs and tubes are scannable to allow the instrument to recognize reagent placement on liquid handler decks. The magnetic particle-based purification system ensures fast and efficient binding, washing, and elution of DNA. Up to 250 µL of whole blood and up to 500 µL of saliva can be eluted in 50-200 µL of elution buffer. The purified DNA is of high quality, suitable for immediate use in downstream applications such as PCR, qPCR, digital PCR, and next-generation sequencing (NGS).

### Important:

1. Please contact your Omega Bio-tek representative for instrument specific instructions. It is the responsibility of the user to validate any automated method for any particular use.
2. This kit includes enough reagents for the specified number of preparations plus at least an additional 10% overage to ensure there is sufficient volume. Please be aware that the actual number of preparations may be lower due to pre-aliquoting of reagents, processing partial plates, and automation platform used, etc. Please visit the product page at [www.omegabiotek.com](http://www.omegabiotek.com) for more details and ordering information.

# Kit Contents and Storage

## Kit Contents

|                             |                |
|-----------------------------|----------------|
| Product No                  | PS6399-1-384PF |
| Purifications               | 4 x 96         |
| 96-well Sample Plates       | 4              |
| 96-well Tip Isolator Plates | 4              |
| AL Buffer                   | 142 mL         |
| iHDQ Binding Buffer         | 184 mL         |
| eVHB Buffer                 | 2 x 222 mL     |
| eSPM Buffer                 | 222 mL         |
| Elution Buffer              | 2 x 210 mL     |
| Mag-Bind® Particles HDQ     | 4 x 2.4 mL     |
| Proteinase K Solution       | 4 x 2.4 mL     |
| User Manual                 | ✓              |

## Storage and Stability

All of the Mag-Bind® Blood & Saliva DNA LSP Kit components are guaranteed for at least 12 months from the date of purchase when stored as follows. Mag-Bind® Particles HDQ should be stored at 2-8°C for long-term use. Proteinase K Solution can be stored at room temperature for up to 12 months. For long-term storage, store Proteinase K Solution at 2-8°C. All remaining components should be stored at ambient temperature and away from bright light. During shipment or storage in cool ambient conditions, precipitates may form in some buffers. Dissolve such deposits in reagent tubes by warming the solution at 37°C and gently shaking. For reagent reservoirs, invert 20 times to allow precipitates to go back into solution.

# Warnings and Safety Information

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## Warnings

This kit is for professional research use.

Please decontaminate and dispose of all potentially infectious materials in accordance with applicable local, state/provincial, and/or national regulations. For any assistance, please contact Omega Bio-tek at [info@omegabiotek.com](mailto:info@omegabiotek.com).

If you use this kit following an automated extraction workflow, the surface of the automated platform is considered a biohazard. Use appropriate decontamination and disposal methods in adherence to all applicable local state/provincial, and/or national regulations.

## Safety Information

All chemicals and biological materials are potentially hazardous.



Biological samples such as plasma, serum, tissues, body fluids, blood, etc. are potentially infectious and must be treated as biohazardous materials. Use appropriate decontaminations and disposal methods in adherence to all applicable local state/provincial, and/or national regulations.

Please refer to safety data sheets (SDSs) for information on safe handling, transport, spills, and disposal of different reagents included in this kit. SDSs are made available in PDF format on the product page at [www.omegabiotek.com](http://www.omegabiotek.com). Discard all waste in accordance with local safety regulations.

# Precautions

## Precautions

Some of the buffers included in the Mag-Bind® Blood & Saliva DNA LSP Kit contain guanidine-based chaotropic agents which can form highly reactive compounds when combined with bleach. **DO NOT add bleach or acidic solutions** to guanidine containing sample-preparation waste. Please access the SDSs online for detailed information on the reagents.

| Component   | Description  |
|---|--|
| AL Buffer   | Contains: Guanidine hydrochloride. Warning! Causes serious eye irritation. Causes skin irritation. Harmful if swallowed. Do not eat, drink or smoke when using this product. Wash all exposed external body areas thoroughly after handling. Wear protective gloves, protective clothing, eye protection, and face protection. IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if eye irritation persists. Take off contaminated clothing and wash before reuse. ON SKIN: Wash with plenty of water and soap. Get medical advice/attention if skin irritation or rash occurs. SWALLOWED: Rinse mouth. Call a poison center or doctor/ physician if you feel unwell  |
|    |  |
| eSPM Buffer   | Contains: Ethanol. Danger! Causes serious eye irritation. Highly flammable liquid and vapor. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash all exposed external body areas thoroughly after handling. Wear protective gloves/clothing/ eye/face protection. In case of fire: Use alcohol resistant foam or normal protein foam to extinguish. IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if eye irritation persists. ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
|  |  |

# Precautions

| Component             | Description   |
|-----------------------|---|
| Proteinase K Solution | Contains: Proteinase K. Danger! Causes mild skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing dust/fume/gas/mist/ vapors/spray. Wear protective gloves/protective clothing/ eye protection/face protection. Wear respiratory protection. If exposed or concerned: Call a poison center or doctor/ physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing.   |
| iHDQ Binding Buffer   | Contains: Sodium perchlorate and isopropanol. Danger! Causes skin irritation and serious eye irritation. Flammable liquid and vapor. May cause fire or explosion; strong oxidizer. May cause drowsiness or dizziness. Avoid breathing mist/ vapors/spray. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Take any precaution to avoid mixing with combustibles/organic material. Keep/store away from clothing/organic material/ combustible materials. Wear fire/flame resistant retardant clothing. Wash all exposed external body areas thoroughly after handling. Wear protective gloves/clothing/eye/face protection. In case of fire: Use alcohol resistant foam or normal protein foam to extinguish. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water and soap. Get medical attention/advice if irritation persists. INHALED: Remove person to fresh air and keep comfortable for breathing. |



# Precautions

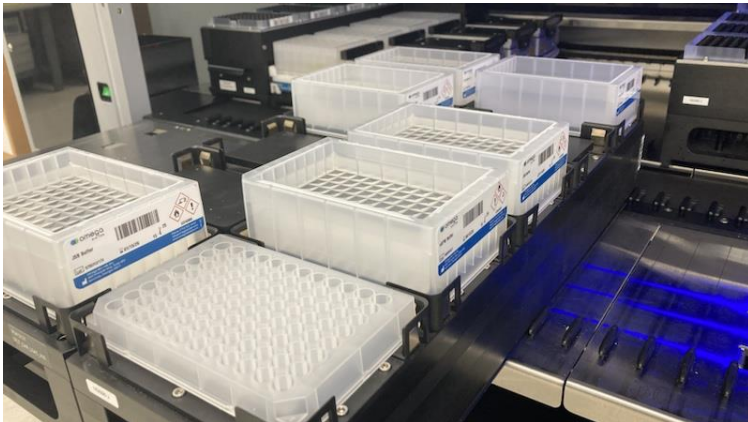
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Call a POISON CENTER/ doctor/physician/first aider if you feel unwell.

# Plasticware Handling and Preparation

## Plasticware Handling and Preparation

1. Upon arrival of the kit, unpack and inspect the contents.
2. Store reagent reservoirs upright before use, ideally for at least 24 hours to ensure reagents are not retained on the seal.
3. Always check reagent reservoirs and tubes for presence of precipitation before starting extraction. Dissolve precipitates in reagent tubes by warming at 37°C with gentle shaking. For reagent reservoirs, invert 20 times.
4. Mag-Bind® Particles HDQ should be vortexed for at least 1 minute before loading on instrument deck.
5. When loading the deck, ensure that all barcodes are facing in the correct orientation so that they can be scanned by the instrument's barcode reader.



*Figure 1. Loaded reagent reservoirs.*

# Plasticware Handling and Preparation



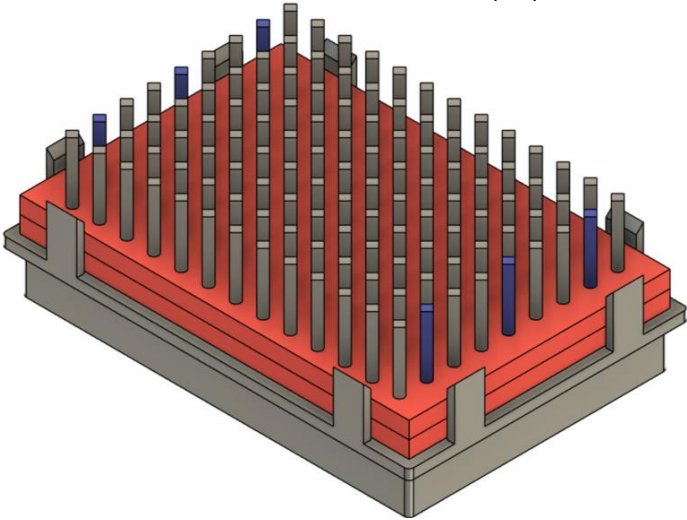
*Figure 2. Loaded reagent tubes.*

# Important Notes

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## Important Notes

1. Please consult an Omega Bio-tek Field Application Scientist before running this kit for the first time.
2. Reservoirs can be resealed with parafilm (4" width) when not in use and are stable for up to 7 days after removing the original seal.
3. This kit utilizes the VP 7710ZM-1 magnetic plate from V&P Scientific, Inc. (Cat# VP7710ZM-1) for the bind and wash steps. Shown below are the posts in blue that need to be removed for the 96-well Sample plates to fit snugly.



4. This kit utilizes the Magnum FLX® magnetic plate from Alpaqua® (Cat# A000400) for the elution steps.

# Mag-Bind® Blood & Saliva DNA LSP Kit

## Protocol for Blood

The procedure below has been optimized for use with 250  $\mu$ L FRESH or FROZEN blood samples. Buffy coat can also be used (up to 100  $\mu$ L).

**Important:** If using this kit for the first time, please consult an Omega Bio-tek Field Application Scientist (FAS) at [automation@omegabiotek.com](mailto:automation@omegabiotek.com).

Materials and Equipment to be Supplied by User:

- 96-well elution plates
- Parafilm, 4-inch width (for partial runs)
- Optional: 1X PBS

Before Starting:

- Prepare reagent reservoirs and tubes according to the "Plasticware Handling and Preparation" on Page 9.
1. Select one of the following sample preparation methods.
    - a. **Blood:** Add up to 250  $\mu$ L blood sample to 96-well Sample Plate. Bring volume up to 250  $\mu$ L with Elution Buffer or 1X PBS if the sample volume is less than 250  $\mu$ L. Add 250  $\mu$ L Elution Buffer or 1X PBS to any unused wells of the Sample Plate. Proceed with Step 2 of this protocol.
    - b. **Buffy Coat:** Add up to 100  $\mu$ L buffy coat sample to the 96-well Sample Plate. Bring volume up to 250  $\mu$ L with Elution Buffer or 1X PBS if the sample volume is less than 250  $\mu$ L. Add 250  $\mu$ L Elution Buffer or 1X PBS to any unused wells of the Sample. Proceed with Step 2 of this protocol.

**Note:** Additional Elution Buffer can be purchased separately. Please visit the product page at [www.omegabiotek.com](http://www.omegabiotek.com) for more details and ordering information.

# Mag-Bind® Blood & Saliva DNA LSP Kit

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2. Start the program on the liquid handler instrument.
3. When prompted, select the sample type "Blood/Cells" from the drop-down menu.
4. When prompted, select the number of sample plates (1-4) and the elution volume (50-200 µL).
5. When prompted, load isolator plates, tip racks (user-supplied), sample plates, and elution plate (user-supplied) in the designated positions on the liquid handler deck.
6. When prompted, load reagent reservoirs in the designated positions and carefully remove the seals.
7. When prompted, load reagent tubes in the designated positions and remove the caps.

**Note:** Mag-Bind® Particles HDQ should be vortexed for at least 1 minute before loading on instrument deck.

8. When prompted, select START to begin running the method.
9. Once run is completed, remove Elution plate from instrument.
10. Store DNA at -20°C.
11. Cover unused reagent reservoirs with parafilm for storage up to 7 days, replace caps of unused reagent tubes, and store at recommended temperature.

# Mag-Bind® Blood & Saliva DNA LSP Kit

## Protocol for Saliva

**Important:** If using this kit for the first time, please consult an Omega Bio-tek Field Application Scientist (FAS) at [automation@omegabiotek.com](mailto:automation@omegabiotek.com).

Materials and Equipment to be Supplied by User:

- 96-well elution plates
- Parafilm, 4-inch width (for partial runs)
- Optional: 1X PBS

Before Starting:

- Prepare reagent reservoirs and tubes according to the "Plasticware Handling and Preparation" on Page 9.
1. Transfer 500  $\mu$ L stabilized saliva samples (e.g., DNA Genotek Oragene®, Mawi iSWAB™, Biomatrix® DNAGard® Saliva) to a 96-well Sample Plate.
  2. Start the program on the liquid handler instrument.
  3. When prompted, select the sample type "Saliva" from the drop-down menu.
  4. Select the number of sample plates (1-4) and the elution volume (50-200  $\mu$ L).
  5. When prompted, load isolator plates, tip racks (user-supplied), sample plates, and elution plate (user-supplied) in the designated positions on the liquid handler deck.

# Mag-Bind® Blood & Saliva DNA LSP Kit

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6. When prompted, load reagent reservoirs in the designated positions and carefully remove the seals.
7. When prompted, load reagent tubes in the designated positions and remove the caps.

**Note:** Mag-Bind® Particles HDQ should be vortexed for at least 1 minute before loading on instrument deck.

8. When prompted, select START to begin running the method.
9. Once run is completed, remove Elution plate from instrument.
10. Store DNA at -20°C.
11. Cover unused reagent reservoirs with parafilm for storage up to 7 days, replace caps of unused reagent tubes, and store at recommended temperature.

# Mag-Bind® Blood & Saliva DNA LSP Kit

## Protocol for Cultured Cells

The procedure below is designed for rapid isolation of genomic DNA from up to  $1 \times 10^6$  cultured cells.

**Important:** If using this kit for the first time, please consult an Omega Bio-tek Field Application Scientist (FAS) at [automation@omegabiotek.com](mailto:automation@omegabiotek.com).

Materials and Equipment to be Supplied by User:

- Centrifuge capable of  $\geq 10,000g$  for microcentrifuge tubes
- Vortexer
- Cold 1X PBS

Before Starting:

- Prepare reagent reservoirs and tubes according to the “Plasticware Handling and Preparation” on Page 9.
1. Select one of the following below to prepare for cell suspension.
    - a. Frozen cell samples should be thawed before starting this protocol. Pellet cells by centrifugation. Wash the cells with cold PBS (4°C) and resuspend cells in 250  $\mu$ L cold PBS. Proceed with Step 2 of this protocol.
    - b. For cells grown in suspension, pellet  $1 \times 10^6$  cells at 1,200g in a centrifuge tube. Discard the supernatant, wash the cells once with cold PBS (4°C), and resuspend cells in 250  $\mu$ L cold PBS. Proceed with Step 2 of this protocol.
    - c. For cells grown in monolayer, harvest the cells by either using a trypsin treatment or cell scraper. Wash cells twice in cold PBS (4°C) and resuspend the cells with 250  $\mu$ L cold PBS. Proceed with Step 2 of this protocol.

# Mag-Bind® Blood & Saliva DNA LSP Kit

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2. Transfer 250 µL cell suspension sample to a 96-well Sample Plate.
3. Start the program on the liquid handler instrument.
4. When prompted, select the sample type “Blood/Cells” from the drop-down menu.
5. Select the number of sample plates (1-4) and the elution volume (50-200 µL).
6. When prompted, load isolator plates, tip racks (user-supplied), sample plates, and elution plate (user-supplied) in the designated positions on the liquid handler deck.
7. When prompted, load reagent reservoirs in the designated positions and carefully remove the seals.
8. When prompted, load reagent tubes in the designated positions and remove the caps.  
  
**Note:** Mag-Bind® Particles HDQ should be vortexed for at least 1 minute before loading on instrument deck.
9. When prompted, select START to begin running the method.
10. Once run is completed, remove Elution plate from instrument.
11. Store DNA at -20°C.

# Mag-Bind® Blood & Saliva DNA LSP Kit

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12. Cover unused reagent reservoirs with parafilm for storage up to 7 days, replace caps of unused reagent tubes, and store at recommended temperature.

# Troubleshooting Guide

## Troubleshooting Guide

Please use this guide to solve any problems that may arise. We hope that it will aid in clearing up any questions for you. If you need further assistance, please contact our technical support staff at our Toll Free Number, 1-800-832-8896.

### Possible Problems and Suggestions

| Problem                             | Cause  | Solution  |
|-------------------------------------|--|---|
| Low DNA yield                       | Loss of Mag-Bind® Particles HDQ during operation | Contact Omega Bio-tek product support.  |
|                                     | Incorrect plasticware used during operation      | Make sure to use the plasticware that is included in the kit and plasticware approved for use on the liquid handler. Contact Omega Bio-tek product support. |
|                                     | Incorrect reagent reservoir and tube storage     | Store reagent reservoirs and tubes at recommended temperatures.   |
| Problems in downstream applications | Ethanol carryover                                | Dry the Mag-Bind® Particles HDQ before elution. Contact Omega Bio-tek product support for protocol adjustments.   |
| Problems with instrument operation  | Wrong method run on instrument                   | Double check that the correct method was used.  |
|                                     | Instrument errors during operation               | Contact instrument manufacturer and/or Omega Bio-tek product support.   |

# Contact Information

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## Contact Information







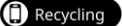
To reorder supplies, report a device failure or complaint, please contact:

|   |  |
|---|--|
|  | <p><b>Manufacturer</b><br/>Omega Bio-tek, Inc.<br/>400 Pinnacle Way<br/>Suite #450<br/>Norcross, GA 30071, USA<br/>Website: <a href="http://www.omegabiotek.com">www.omegabiotek.com</a><br/>Email: <a href="mailto:info@omegabiotek.com">info@omegabiotek.com</a></p> |
|---|--|








# Symbols

## Symbols

The following symbols may appear in the instructions for use or on the packaging and labeling:

| Picture   | Description   |
|---|---|
|  YYYY-MM | Use-by date   |
|          | Check components for storage conditions   |
|          | Lot number  |
|          | Manufacturer  |
|          | No additional hazards or not classified as hazardous according to GHS. Also see hazardous symbols as defined in the Precautions Section |
|         | Recycling Information visit <a href="https://omegabiotek.com/company/recycling">https://omegabiotek.com/company/recycling</a>           |
|        | Recycling   |

# Symbols

| Picture   | Description |
|---|-------------|
|  | Website     |
|  | Telephone   |
|  | Fax         |
|  | Email       |
|  | LinkedIn    |
|  | X           |
|  | Facebook    |

# Document Revision History

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## Document Revision History

| Revision | Description   |
|----------|---|
| v1.1     | Added magnet types used in this kit under "Important Notes" |
| v1.0     | Initial release   |

# Notices and Disclaimers

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## Notices and Disclaimers

### For European Union Use

AL Buffer contains Triton X-100, 2-[4-(2,4,4-trimethylpentan-2-yl)phenoxy]ethanol (CAS 9002-93-1), a substance included in the European Authorization list (Annex XIV) of REACH Regulation (EC) No 1907/2006. Substances and mixtures used for the purpose of Scientific Research and Development (SR&D) are exempt from authorization requirements if used below 1 tonne per year in volume.

Scientific Research and Development includes experimental research or analytical activities at a laboratory scale such as synthesis and testing of applications of chemicals, release tests, etc. as well as the use of the substance in monitoring and routine quality control or in vitro diagnostics.

### Trademarks and Licenses

HiBind®, E.Z.N.A.®, MicroElute®, Mag-bind®, and MagBinder® are registered trademarks of Omega Bio-tek, Inc.

Qiagen®, QIAvac®, and Vacman® are all trademarks of their respective companies.

PCR is a patented process of Hoffman-La Roche. Use of the PCR process requires a license.



For more purification solutions, visit [www.omegabiotek.com](http://www.omegabiotek.com)

## AVAILABLE FORMATS



Spin Columns



96-Well Silica Plates



Mag Beads

## SAMPLE TYPES



Blood / Plasma



Plasmid



Cultured Cells



Plant & Soil



NGS Clean Up



Tissue



FFPE



Fecal Matter



Omega Bio-tek, Inc.  
400 Pinnacle Way, Suite 450  
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 [www.omegabiotek.com](http://www.omegabiotek.com)



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