1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: DO Supplement –His/-Leu/-Trp
Product Code(s): 630419
Identified Uses: For research use only. Not for use in diagnostic procedures.
Supplier Address: USA:
Clontech Laboratories, Inc.
A Takara Bio Company
1290 Terra Bella Avenue
Mountain View, CA 94043
Phone: 800.662.2566/888.251.6618
Web: www.clontech.com

Emergency Telephone: In case of emergency, call PERS (Professional Emergency Resource Services) at 1-800-633-8253 (US) or 801-629-0667 (International).

2. HAZARDS IDENTIFICATION

Label Precautionary Statements
Irritant
Irritating to eyes, respiratory system and skin.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing.

Caution
The toxological properties of this chemical have not been thoroughly investigated.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>RTECS No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-Tyrosine</td>
<td>60-18-4</td>
<td>YP2275600</td>
<td>5-10</td>
</tr>
<tr>
<td>L-Adenine</td>
<td>321-30-2</td>
<td>AU7140000</td>
<td>1-5</td>
</tr>
</tbody>
</table>

See Actual entry in RTECS for complete information.

4. FIRST AID MEASURES

General advice
In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes.
Inhalation  Move to fresh air.

Ingestion  Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Note To Physician  Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions  For personal protection see section 8.

Methods for Containment  Prevent further leakage or spillage if safe to do so.

Clean Up Measures  Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling  Avoid contact with skin, eyes, and clothing.
Handle in accordance with good industrial hygiene and safety practice.

Storage  Keep in properly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Engineering Controls
The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

Personal Protective Equipment

Eye/face protection:  Safety glasses with side shields.
Skin and body protection:  Wear suitable protective clothing. Protective shoes or boots.
Respiratory protection:  None required under normal usage.
Hand protection:  Latex gloves.

Hygiene Measures
When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance  No information available
Physical State  Solid
pH  No information available
Solubility  No information available
Odor  No information available
Specific Gravity  No information available
Boiling Point  No information available
Melting Point
No information available

10. STABILITY AND REACTIVITY

Stability
Stable under recommended storage conditions.

Conditions to Avoid
None known based on information supplied.

Incompatible Products
Strong oxidizers.

Hazardous Decomposition Products
Toxic fume of carbon monoxide, carbon dioxide. Ventilate area and wash spill site after material pickup is complete.

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Acute Effects
May be harmful by inhalation, ingestion, or skin absorption. Cause eye and skin irritation. Material is irritating to mucous membranes and upper respiratory tract.

Chronic Toxicity
Target Organ Effects
No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

Transportation and Hazardous Materials Description
Package and transport in accordance with Department of Transportation (DOT) and other regulatory agency requirements.

U. S. DOT proper shipping name
Not regulated as a hazardous materials

IATA proper shipping name
Not regulated as a hazardous materials

Identification number
None

15. REGULATORY INFORMATION

International Inventories
For research use only
Ensure that the hazards associated with this product are transmitted to employees by means of a hazard communications program, in accordance with federal and state Occupational Safety and Health Administration (OSHA) regulations.

CERCLA/SUPERFUND HAZARD CATEGORY
At the time of this document’s preparation, none of the ingredients of this product were listed in 40 CFR 302.4. The list should be periodically checked for applicable updates.

SARA 313 INFORMATION
At the time of this document’s preparation, none of the ingredients of this product were listed in 40 CFR 372. The list should be periodically checked for applicable updates.

TOXIC SUBSTANCES CONTROL ACT (TSCA)
Most of the compounds in this product are on the TSCA Inventory and/or are subject to a Low Volume Exemption. Some of the components in the solution are not on TSCA lists (R&D Use Only). In accordance with federal regulations, this product shall be used only as a research reagent. In particular, this material shall not be distributed to any person, other than for disposal. All users must utilize the worker protection measures and environmental release controls specified in this Material Safety Data Sheet and in EPA and OSHA regulations. Acknowledgment of receipt of this Material Safety Data Sheet shall be considered acknowledgment that the user will comply with these requirements.

UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)
This product/sample contains small amounts of animal-derived components. According to USDA guideline for importation #1121, USDA import permit is not required for the importation of this material into the US.
1. This preparation is a test kit component and is ready for use.
   2. The test kits and/or kit components are not intended to be used to diagnose infectious diseases of animals.

CALIFORNIA PROPOSITION 65
At the time of this document’s preparation, none of the ingredients of this product were included on the California proposition 65 list of chemicals known to cause cancer or reproductive toxicity. The list should periodically be checked for applicable updates.

16. OTHER INFORMATION

Disclaimer:
The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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End of MSDS