

# L-Lysine

Cell Culture Tested

**Product Code: TC207**

## Product Description :

Synonym: 2,6-diaminohecaproic acid

Molecular Weight: 146.19

Molecular Formula:  $\text{H}_2\text{N}(\text{CH}_2)_4\text{CH}(\text{NH}_2)\text{CO}_2\text{H}$

CAS Number: 56-87-1

L-Lysine is ketogenic, essential  $\alpha$ -amino acid coded by codons AAA and AAG. It is chemically basic in nature. Its *in vivo* metabolism leads to generation of Acetoacetyl CoA via transamination of  $\alpha$ -ketoglutaric acid, however it does not participate directly in production of glucose. Animal cells cannot synthesize lysine whereas plant and bacteria synthesize lysine from aspartic acid.

Being an essential amino acid it is very widely used in cell culture media. It plays vital role in cell growth and proliferation *in vitro*. Some of the major functions of L-Lysine are:

- Calcium absorption
- Precursor in carnitine synthesis
- Transport of fatty acids into mitochondria for oxidation

## Quality Control:

### Appearance

White or light yellow powder.

### Solubility

Clear yellow solution at 10gm in 100ml of water

### Ammonium (NH<sub>4</sub>)

NMT 0.02%

### Arsenic (As)

NMT 0.0001%

### Assay

NLT 98.5%

### Chloride (Cl)

NMT 0.1%

### Heavy metals(as Pb)

NMT 0.001%

### Iron (Fe)

NMT 0.001%

### Specific rotation [ $\alpha$ ]<sub>20/D</sub>

+25.0° to +27.0°

### Other amino acids

Meet the requirement

### Residue on ignition (sulfated)

NMT 0.5%

### Loss on drying

NMT 5%

### Cell Culture Test

Passes

## Storage and Shelf Life:

Store at 15-30°C away from bright light.

Shelf life is 36 months.

Use before expiry date given on the product label.

## Disclaimer :

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