

## General Lysine Assay Kit

Lysine Microplate Assay Kit

|                               |                              |                                         |
|-------------------------------|------------------------------|-----------------------------------------|
| CATALOG #<br><b>AAA264742</b> | REACTIVITY<br><b>General</b> | APPLICATIONS<br><b>Functional Assay</b> |
|-------------------------------|------------------------------|-----------------------------------------|

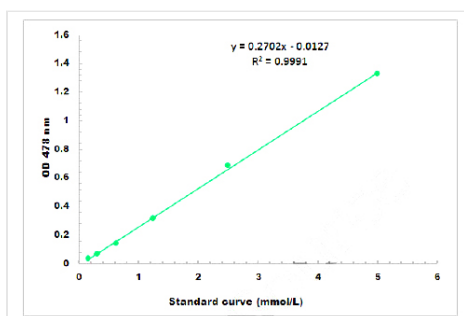
### PRODUCT SYNONYMS

Lysine; Lysine Microplate Assay Kit; Lysine assay kit

### PRODUCT SPECIFICATIONS

|                                              |                                                                                                     |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Reactivity                                   | General                                                                                             |
| Samples                                      | Serum, plasma, tissue extracts, cell lysate, cell culture media and other biological fluids samples |
| Detection Range                              | 0.1 mmol/L - 5 mmol/L                                                                               |
| Applicable Applications for Lysine assay kit | FA (Functional Assay)                                                                               |
| Preparation and Storage                      | Store at 4 degree C for 6 months.                                                                   |

### IMAGES



Standard Curve (Sample)

### ADDITIONAL INFORMATION

#### Related Product Information for Lysine assay kit

**Background/Introduction:** Lysine (symbol Lys or K) is an alpha-amino acid that is used in the biosynthesis of proteins. It contains an alpha-amino group (which is in the protonated  $-NH_3^+$  form under biological conditions), an alpha-carboxylic acid group (which is in the deprotonated  $-COO^-$  form under biological conditions), and a side chain lysyl  $((CH_2)_4NH_2)$ , classifying it as a basic, charged (at physiological pH), aliphatic amino acid. The human body cannot synthesize lysine, so it is essential in humans and must be obtained from the diet. In organisms that synthesise lysine, it has two main biosynthetic pathways, the diaminopimelate and alpha-aminoadipate pathways, which employ different enzymes and substrates and are found in different organisms. Lysine catabolism occurs through one of several pathways, the most common of which is the saccharopine pathway. Lysine plays several roles in humans, most importantly proteinogenesis, but also in the crosslinking of collagen polypeptides, uptake of essential mineral nutrients, and in the production of carnitine, which is key in fatty acid metabolism. Lysine is also often involved in histone modifications, and thus, impacts the epigenome. The epsilon-amino group often participates in hydrogen bonding and as a general base in catalysis. The epsilon-ammonium group ( $NH_3^+$ ) is attached to the fourth carbon from the alpha-carbon, which is attached to the carboxyl ( $C=OOH$ ) group. Lysine react with ninhydrin, the reaction products can be measured at a colorimetric readout at 478 nm.

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/general-assay-kits/lysine/264742>