

Tyrosine Assay Kit

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CATALOG #
AAA44649

PRODUCT SYNONYMS

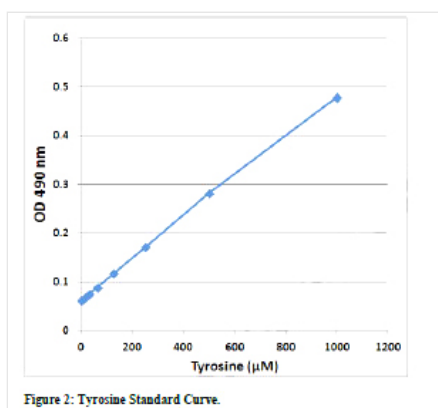
Tyrosine; Tyrosine Assay Kit; Tyrosine assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Upon receipt, store the Tyrosine Standard and 10X Enzyme at -20 degree C. Store the 10X Assay Buffer at room temperature.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Tyrosine assay kit	Background: Tyrosine (also known as 4-hydroxyphenylalanine) is one of the 20 amino acids that serve as building blocks to form peptides and proteins. As a part of proteins, tyrosine plays a role in signal transduction since phosphate groups are transferred to the hydroxyl group of the phenolic side chain of tyrosine by receptor tyrosine kinases, resulting in a change in activity of the target phosphorylated protein. In addition, a tyrosine side chain contributes to the process of photosynthesis. In photosystem II of chloroplasts, tyrosine residue 161 of P680 acts as an electron donor to reduce oxidized chlorophyll. In plants and lower microorganisms, tyrosine is synthesized from the precursor prephenate (the latter also an intermediate to synthesis of shikimate). Prephenate is decarboxylated to create p- hydroxyphenylpyruvate, which is then transaminated to yield tyrosine and alpha-ketoglutarate. In animals tyrosine is created from dietary sources of the essential amino acid phenylalanine. Phenylalanine is converted to tyrosine by the enzyme phenylalanine hydroxylase. Tyrosine is a neurotransmitter precursor and increases the levels of plasma neurotransmitters such as norepinephrine and dopamine. A number of studies have found tyrosine to reduce stress under conditions of sleep deprivation, prolonged work, cold, or fatigue, and includes reductions in stress hormone levels, and stress-induced weight loss. In addition, improvements in cognitive and physical performance have been observed in humans. Tyrosine Assay Kit is a simple colorimetric assay that measures the total amount of free tyrosine present in foods or biological samples in a 96-well microtiter plate format. The Tyrosine Assay Kit can also detect L-DOPA, gamma-L-glutaminy-3,4-hydroxybenzene (GHB), and gamma-glutaminy-3,4-dihydroxybenzene (GDHB). Tyrosine is enzymatically oxidized to a colorimetric intermediate which is then measured with a standard 96-well spectrophotometric plate reader. Samples are compared to a known concentration of tyrosine standard within the 96-well microtiter plate format. Each kit provides sufficient reagents to perform up to 100 assays, including blanks, tyrosine standards, and unknown samples. Sample tyrosine concentrations are determined by comparison with a known glycine standard. The kit has a detection sensitivity limit of 15.6 uM tyrosine.
Product Categories/Family for Tyrosine assay kit	Metabolism Research; Cellular Metabolism; Amino Acid Metabolism

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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/assay-kits/tyrosine/44649>