

Hydroxyproline Assay Kit

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CATALOG #
AAA44632

PRODUCT SYNONYMS

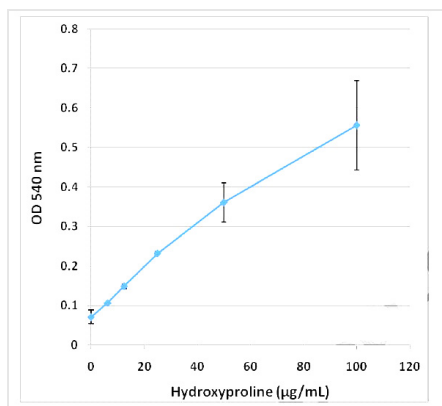
Hydroxyproline; Hydroxyproline Assay Kit; Hydroxyproline assay kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Upon receipt, store the entire kit at 4 degree C.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Hydroxyproline assay kit	Principle of the Assay: The Hydroxyproline Assay Kit provides a convenient colorimetric method for the detection of total hydroxyproline from tissue, plasma, serum, or urine acid-hydrolysates. First, the unknown samples or hydroxyproline standards are added to a 96 well plate. Then, a Chloramine T mixture is added to convert the hydroxyproline to a pyrrole. Finally, a 4-(Dimethylamino)benzaldehyde (DMAB) mixture (also known as Ehrlich's Reagent) is added to the well which reacts with the pyrrole to produce a chromophore (Figure 1) and the absorbance of the plate is read at 540-560 nm. The content of hydroxyproline in the unknown samples is determined by comparison with a predetermined hydroxyproline standard curve. The provided reagents are sufficient for the evaluation of 96 assays including standards and unknown samples. Background/Introduction: Hydroxyproline is an amino acid that is synthesized from the irreversible post-translational hydroxylation of proline by prolyl hydroxylase. Hydroxyproline is found almost exclusively in the protein collagen, in the Y position of the repeating tripeptide Gly-X-Y. By allowing sharp twisting of the collagen helix, hydroxyproline helps to stabilize the structure of collagen. In addition to collagen, hydroxylation of proline has been observed on the transcription factor Hypoxia Inducible Factor (HIF-1). Under normal oxygen conditions the protein EGLN1 hydroxylates HIF-1 alpha at proline 564, allowing ubiquitylation by the von Hippel-Lindau tumor suppressor (pVHL) and causing the targeting of HIF-1 for degradation by the proteasome. Since hydroxyproline has been found on so few proteins other than collagen, measurement of hydroxyproline has been used as a marker to quantify levels of collagen and/or gelatin (partial hydrolysis of collagen resulting in a mixture of protein and peptides). It is estimated that hydroxyproline makes up 13.5% of collagen. In addition, hydroxyproline measurement has been used to identify certain diseases that involve breakdown of collagen. For example, increased levels of collagen have been measured in serum of Paget's Bone Disease. In addition, increased hydroxyproline levels have been correlated with prostatic carcinoma bone metastases, hepatic fibrosis, as well as melamine and cyanuric acid induced nephrotoxicity.
Product Categories/Family for Hydroxyproline assay kit	Metabolism Research; Amino Acid Metabolism; Hydroxyproline Assay Kit

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/assay-kits/hydroxyproline/44632>