

Rat hydroxyproline, Hyp ELISA Kit | Hyp elisa kit

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CATALOG #
AAA80753

REACTIVITY
Rat

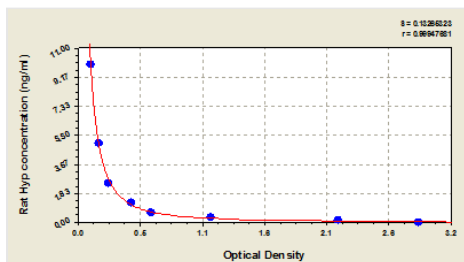
PRODUCT SYNONYMS

hydroxyproline; Hyp; Rat hydroxyproline; Hyp ELISA Kit; Hyp elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Rat
Samples	Serum, plasma, tissue homogenates
Detection Range	0.156 ng/ml-10 ng/ml
Sensitivity	0.039 ng/ml
Detection Wavelength	450 nm
Sample Volume	50-100ul
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for Hyp elisa kit	Introduction: 4-Hydroxyproline (Hyp), or hydroxyproline (C5H9O3N), is an uncommon amino acid. Hydroxyproline differs from proline by the presence of a hydroxyl (OH) group attached to the C (gamma) atom. Hydroxyproline is produced by hydroxylation of the amino acid proline by the enzyme prolyl hydroxylase following protein synthesis (as a post-translational modification). The enzyme catalysed reaction takes place in the lumen of the endoplasmic reticulum. Hydroxyproline is a major component of the protein collagen. Hydroxyproline and proline play key roles for collagen stability. They permit the sharp twisting of the collagen helix. In the canonical collagen Xaa-Yaa-Gly triad (where Xaa and Yaa are any amino acid), a proline occupying the Yaa position is hydroxylated to give a Xaa-Hyp-Gly sequence. This modification of the proline residue increases the stability of the collagen triple helix. It was initially proposed that the stabilization was due to water molecules forming a hydrogen bonding network linking the prolyl hydroxyl groups and the main-chain carbonyl groups. It was subsequently shown that the increase in stability is primarily through stereoelectronic effects and that hydration of the hydroxyproline residues provides little or no additional stability. Hydroxyproline is found in few proteins other than collagen. The only other mammalian protein which includes hydroxyproline is elastin. For this reason, hydroxyproline content has been used as an indicator to determine collagen and/or gelatin amount. Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to Hyp. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for Hyp and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain Hyp, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of Hyp in the samples is then determined by comparing the O.D. of the samples to the standard curve.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	335035289
NCBI Accession #	ZP_08528630.1
NCBI GenBank Nucleotide #	NZ_AECL01000035.1

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://www.aaabiotech.com/rat-elisa-kits/hydroxyproline-hyp/80753>