9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

COL4A3 Human, Biotin

Collagen Type IV Alpha 3 Human Recombinant, Biotinylated
RCP0479

Product Overview

Name	COL4A3 Human, Biotin

Description

Collagen Type IV Alpha 3 Human Recombinant, Biotinylated

Accession (Primary)	Q01955

Synonyms

Collagen alpha-3(IV) chain, Goodpasture antigen, COL4A3, Glomerular Basal Membrane, GBM.

Introduction

Type IV collagen is a major structural component of basement membranes. It is a multimeric protein composed of 3 alpha subunits, which are encoded by 6 different genes, alpha 1 through alpha 6. Each of these alpha subunits can form a triple helix structure with 2 other subunits to form type IV collagen. The Goodpasture syndrome is a condition in which autoantibodies bind to the collagen molecules in the basement membranes of alveoli and glomeruli. The epitopes that elicit these autoantibodies are restricted basically to the non-collagenous C-terminal domain of the protein. There are numerous alternative transcripts that appear to be unique to the human COL4A3 and alternative splicing is limited to the six exons that encode this C-terminal domain. COL4A3 is also linked to an autosomal recessive form of Alport syndrome. The mutations contributing to the Alport syndrome are also situated within the exons that encode this C-terminal region. COL4A3 is organized in a head-to-head conformation with another type IV collagen gene so that each gene pair shares a common promoter. Several exons of COL4A3 are interspersed with exons of an uncharacterized gene which is on the opposite strand.

Source

Sf9 insect cells.

Physical Appearance

Sterile Filtered clear solution.

Formulation

COL4A3 Human biotin contains 20mM HEPES, pH 7.5, 0.02% SDS and 0.01mM EDTA.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles .

Purity

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Greater than 87% as determined by Capillary Electrophoresis.

Immunological functions

1. Binds IgG type human auto antibodies. 2. Functional Streptavidin based ELISA test (analysis of positive/negative samples.)

Note

It has been reported that the immunodominant epitope of COL4A3 is a cryptic epitope that is not easily accessible to the corresponding autoantibodies. It is necessary to treat the protein under nonreducing conditions with a denaturant such as urea to unmask the epitopes (see Hellmark et al. in Autoantibodies, Peter, J.B. and Shoenfeld, Y., eds., Elsevier B.V., 1996, pp 291-298).

Precautions

COL4A3 Human, Biotin is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (Q01955)