9051 Mira Mesa Blvd, #910094
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COL4A3 Human

Collagen Type IV Alpha 3 Human Recombinant
RCP0478

Product Overview

Name	COL4A3 Human
Description	
Collagen Type IV Alpha 3 Human Recombinant	
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	
The protein solution contains 20mM Hepes, pH 8.0 and 4M Urea.	
Stability	
Recommendations for storage buffer: neutral to slightly alkaline pH and 4M urea as dissociating agent. Storage temperature: -70°C to -80°C. Please prevent freeze-thaw cycles.	
Purity	

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Greater than 95.0% as determined by SDS-PAGE.

Immunological functions

1. Binds IgG-type human auto-antibodies. 2. Standard ELISA test (checkerboard analysis of positive/negative samples. 3. Immunodot test with positive/negative samples.

Coating concentration

0.12-0.5 µg/ml (depending on the type of ELISA plate and coating buffer). Suitable for labeling of functional groups.

Note

It has been reported that the immunodominant epitope of GBM 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 is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (Q01955)