Data Sheet (Cat.No.TMPY-03272)

TargetMol

COL4A3 Protein, Rat, Recombinant (hFc)

General Information

Synonyms:	collagen, type IV, α3 (Goodpasture antigen);collagen, type IV, alpha 3 (Goodpasture antigen)
Protein Construction:	A DNA sequence encoding the rat COL4A3 (NP_001129231) (Gly1426-His1670) was expressed with Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	NP_001129231
Molecular Weight:	55.2 kDa (predicted); 59 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

COL4A3 is a major structural component of basement membranes. It is 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 COL4A3. Autoantibodies bind to the collagen molecules in the basement membranes of alveoli and glomeruli can cause goodpasture syndrome. COL4A3 is also linked to an autosomal recessive form of alport syndrome. COL4A3 is organized in a head-to-head conformation and each gene pair

shares a common promoter.

Reference

Ghebrehiwet B. et al., 1992, J Leukoc Biol. 51 (6): 546-56.
Maziers N. et al., 2006, Nephrol Ther. 1 (2): 90-100.
Rana K. et al., 2005, Semin Nephrol. 25 (3): 163-70.