Collagen 3 alpha 1 Rabbit monoclonal antibody

Catalog: MB66330 Host: Rabbit Reactivity: Human, Mouse, Rat

BackGround:

The Extracellular Matrix (ECM) is a complex network of macromolecules that provides structural tissue support to cells in the basement membrane and interstitial matrix. It is composed of many molecules including proteins, glycoproteins, proteoglycans, and polysaccharides. One of the major proteins that comprises the ECM, and the human body, is collagen. Collagens are a large family of proteins. They are trimeric molecules comprised of three alpha polypeptide chains that form a triple helix structure that is characteristic of all collagens. The large family of collagens is divided into three subgroups: fibrillar collagens, non-fibril forming collagens, and fibril-associated collagens. These subgroups differ in their structure and supramolecular assembly. COL3A1 (Collagen 3 alpha 1) is a major fibrillar collagen comprised of three identical alpha-1 chains. It is present in most soft tissues along with COL1A1, and is particularly high in tissues exhibiting elastic properties, such as the cardiac arterial wall and skin. Heterozygous mutations in the COL3A1 gene that cause missense mutation of a critical glycine residue in the triple helical domain of the alpha-1 chain result in vascular Ehlers-Danlos syndrome (vEDS). This mutation interferes with the ability of the alpha-1 chain to form collagen fibrils and thus disrupts macromolecular assembly of collagen fibers. vEDS is a severe and life-threatening disease as patients have a propensity for rupture of large arteries. Increased amounts of type III COL3A1 are found in many fibrotic conditions, such as lung, liver, kidney fibrosis, and systemic sclerosis .

Product:

Liquid in 50mM Tris-Glycine (pH 7.4), 0.15M NaCl, 50% Glycerol, 0.01% Sodium azide and 0.05% BSA.

Molecular Weight:

~ 160 kDa

Swiss-Prot:

P02461

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/100), IP (1/10 - 1/50)

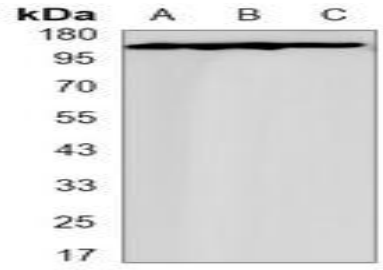
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

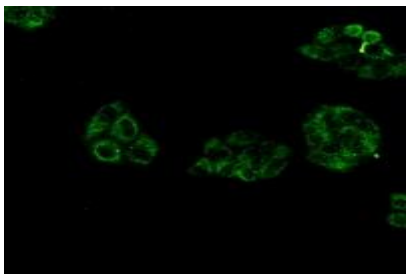
Specificity:

Recognizes endogenous levels of Collagen 3 alpha 1 protein.

DATA:



Western blot analysis of Collagen 3 alpha 1 expression in K562 (A), C6 (B), NIH3T3 (C) whole cell lysates.



Immunofluorescent analysis of Collagen 3 alpha 1 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 ℃ in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated

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secondary antibody (green) in PBS at room temperature in the dark.

For research use only, not for use in diagnostic procedure.

Note:

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