

COL5A1 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	250	Rabbit	#P20908	1289

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

COL5A1 Antibody recognizes endogenous levels of total COL5A1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro364 of human COL5A1 protein. Antibodies are purified by peptide affinity chromatography.

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 (1,2). 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 (3). The large family of collagens is divided into three subgroups: the fibrillar collagens, the non-fibril forming collagens, and the fibril-associated collagens. These sub groups differ in their structure and supramolecular assembly (3). COL5A1 is a minor fibrillar collagen expressed broadly across tissues. It participates in bone and cartilage development, and defects in the COL5A1 gene leads to Ehlers-Danlos Syndrome, a condition that affects the integrity of bones, cartilage, and skin (4,5). Several proteomics, gene profiling, and biochemical studies have indicated that aberrant COL5A1 may play a malignant role in various types of cancer including breast, renal, colon, prostate, lung, and others (6-10). COL5A1 is a minor fibrillar collagen expressed broadly across tissues. It participates in bone and cartilage development, and defects in the COL5A1 gene leads to Ehlers-Danlos Syndrome, a condition that affects the integrity of bones, cartilage and skin (4,5). Several proteomics, gene profiling, and biochemical studies have indicated that aberrant COL5A1 may play a malignant role in various types of cancer including breast, renal, colon, prostate, lung, and others (6-11).

Background References

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6. Wang, S. et al. (2019) *Theranostics* 9, 4342-4353.
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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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